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SPECIAL 1940 COMMEMORATIVE ISSUE

Guest Editor: ARTHUR WARD

8

Europe Ablaze

10

The British Army, 1940

24

Enemies and Allies, 1940

30

Invasion Alert: The Home Defences

36

War in the Skies

47

Civil Defence Services

50

British Armour in France, 1940

BRYAN PERRET

65

Gallery: Bernard Montgomery and Erwin Rommel, 1940

MARTIN WINDROW & BRUCE QUARRIE

Paintings by PETER DENNIS

Editorial	4	The Auction Scene	4
On The Screen	5	Classifieds	5



Our cover shows reconstructions of three Battle of Britain fighter pilots — see article p.36.

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EDITORIAL

This issue of 'MI' is a 'first' in three respects: it is our first enlarged 'special', our first single-subject issue, and the first to be prepared almost entirely by one contributor — our guest editor **Arthur Ward**. Arthur, 30, graduated from art college in 1980 and worked in West End advertising agencies before co-founding a video production company, and later a design partnership which has grown into the Signal Communications design consultancy. Always fascinated with military history, Arthur has written a history of Airfix models; and, last year, the book *A Nation Alone* (Osprey), a lavishly illustrated history of Britain's stand in 1940. He has also contributed to a number of publications, including the souvenir guide to the RAF Museum's 'Battle of Britain Experience'. His spare time passion is collecting Home Front ephemera. He is married, and lives in Sussex.

The section on British armour in France is the first contribution to 'MI' from the well-known tank war-



Arthur Ward

Bryan Perrett



fare author **Bryan Perrett**. Bryan, born in Liverpool in 1934, served between 1952 and 1971 in Regular and Territorial units of the Royal Armoured Corps. For many years he has been a full-time writer on military topics over a wide range; during



Bruce Quarrie

the Falklands War he served as defence correspondent of the *Liverpool Echo*, and he has published many books. He is married, and lives in Lancashire.

Another old friend we are delighted to welcome to these pages is **Bruce Quarrie**, born in 1947, who first came to the attention of the military interest fraternity many years ago as editor of *Airfix Magazine*. His first book, on wargaming, appeared in 1974, since when he has published more than 30 other titles, mostly on the German armed forces of World War II. Bruce is now a freelance researcher and author; he has pursued his research in many countries, on both sides of the Atlantic, and maintains a large book and photograph library. Married with two daughters, he lives in Northamptonshire.

'Brave Men's Blood' Competition answers

The correct answers to the quiz questions, printed in our June editorial, for free copies of Ian Knight's new *Zulu War* book from Greenhill Books are as follows: (1) Lt. Gen. Lord Chelmsford (2) Twelve — eleven to Rorke's Drift defenders, and

one to Pte. S. Wassall, Mounted Infantry, for saving a comrade at Fugitive's Drift; Lts. Melville and Coghill do not count as their posthumous awards were later. (3) Cdt. R. La T. Lonsdale, NNC (4) Prince Dabulamanzi kaMpande (5) Prince Mbilini kaMswati (6) Sgt. Anthony Booth, 80th Regt. (7) Tpr. Grandier, Border Horse, captured at Hlobane. (8) Lt. Col. Redvers Buller (9) Maj. A.C. Twentyman, 4th Regt. (10) Tprs. Abel and Rogers.

Hello out there?

A Mr G.A. Ashley recently wrote to us from a London E14 postmark offering us sight of a most interesting-sounding album. We are indeed interested — but unfortunately he forgot to add his address. If he reads this, we would be grateful if he could contact us again.

Errata

In the first part of Brian Hobbs' article on *Commando Uniforms*, 'MI' No.26, two errors crept in: the *Combined Operations* badge on colour figure 2 is reversed — the *Thompson* gun faced forwards on each sleeve; and on p.13, column 2, line 12, for No.46 Cdo. read No.47 Cdo. Our apologies to the author, and readers.

THE AUCTION SCENE

Most auctions run fairly true to form, the prices varying only within certain generally recognised limits; but every now and then there is an exception to this steady pattern and a price will rocket well above most expectations. When this happens there is a flutter amongst dealers, auctioneers and all those attending. Why has it happened, what has been missed by all except a perceptive few? Sotheby's sale at Billingshurst on Monday 25 June produced just such an occasion.

The sale opened with a minor flurry when an experimental bayonet and its scabbard for the SMLE rifle sold for £850 — surprisingly, but not altogether unexpected, for it was an unusual pattern. A Baker rifle bayonet also climbed to a surprising £620; but then prices settled down to a more mundane level. A French cuirassier's sword dated 1817 made £220; an American Society sword, £150. A group of Third Reich edged weapons sold at usual prices — Army Dagger £140; Luftwaffe 2nd Model dagger £170; SS officer's dagger £550; Red Cross enlisted man's dagger £240; RAD Officer's dagger £400; Naval officer's dagger £170.

Rimfire weapons, still enjoying their freedom from being classed as a licensed firearm, continue to increase in value — £220 for a Colt No.3 derringer. Readers of this column may recall that at a recent Wallis & Wallis Special Sale a flintlock sea service pistol made over £900, well above the usual price; this may have been exceptional, but the demand is being maintained, for a William IV example, late for this type of pistol, sold for £680. A prize .577 Enfield percussion rifle sold for £820 — high; but nothing compared to Lot 284.

This was estimated at £600—£1,000 and was described as an interesting

Middle Eastern, probably Persian, flintlock blunderbuss. The bidding in the room was matched by a telephone bidder; and one soon became aware of the typical hush that falls on an auction room as people realise they are in for an interesting session. In a fairly short time the bidding was in thousands, and finally finished at £32,000, presumably much to the delight of the unknown vendor. The blunderbuss was Indian, and associated with one of the best-known of the Indian rulers who clashed with the British, Tipoo Sahib. (He was a man of strange tastes, and one of his fancies is a model of a British soldier being savaged by a tiger. When activated the model emits the appropriate sounds; it can still be seen, and occasionally heard, in the Victoria and Albert Museum.)

Militaria seems to be staging a slight come-back, and a Victorian naval officer's uniform and sundry other tunics sold for a surprising £580. A collection of swagger sticks once proudly carried by British soldiers were sold in bundles and went for around £170—220. A Russian Cossack officer's tunic circa 1900 made £480. After all the excitement this section of the sale closed with little or no interest in a collection of German and British military vehicles.

At the sale on the 28th at Sotheby's London rooms armour maintained its commanding position; every piece exceeded the low estimate and in many cases the top estimate as well. By coincidence there was a dagger from the armoury of Tipoo Sahib, and one might have expected that this too might take off and sur-

pass all expectations; but although it exceeded the estimate by £1,500 (selling at £4,500) it was expected to do even better.

In the firearms section there seems to be continuing and growing interest in English percussion revolvers. Cased Beaumont Adams 54 bore revolvers were making £550—£600; a cased Kerr revolver reached £700; and a cased Tranter double-trigger revolver went for £800. Among the long arms was a collection of air rifles which all sold well within the estimate figures. It is interesting to note that all the sales of arms and armour are including more air weapons and they are climbing slowly but surely in value. It could be that the irritating limits being placed on shooters are driving more collectors to a field which is, as yet, free from too many restrictions. In the edged weapons section there were few surprises, although a Baldock knife-spear complete with shaft realised the good price of £800. This was a typical Victorian combined weapon designed for the intrepid hunter and explorer; it comprises a solid steel knife with a hollow grip and a substantial bamboo walking stick to which the blade can be attached.

A sale of militaria at Christie's on 29 June included some unusual items. Lot 141, a series of five armorial achievements painted on silk, associated with royal and noble funerals which took place in St. George's Chapel, Windsor in c.1816—40, fetched £6,050 — ten times the estimate. A cased collection of 166 officers' and other buttons of all numbered British regiments made £2,090; and a Royal guidon of the

18th Light Dragoons made £2,640. An extensive set of tunics, headgear, coats, trousers and other items named to a Grenadier Guards officer of the turn of the century achieved £1,650; a Victorian officer's helmet of the Royal Dragoons, £1,540; a good Baden other rank's *Pickelhaube*, with field cover and associated *Feldmütze*, went for the reasonable price of £352; a pre-1897 Mecklenburg-Schwerin officer's *Pickelhaube* made £1,100; and a rare 1830s Russian 18th Lancers officer's *czapka* fetched £4,400.

On 3 July, a most important sale is taking place at Sotheby's London rooms. A Dutchman, Henk Visser, built up what must be counted as one of the last great private collections of arms and armour. The majority of the pieces are top quality firearms, but there is a good sprinkling of edged weapons and a few extremely interesting combination of weapons. The collection is being sold in two sections in July and December of this year. All the items are expensive but all are prime examples, so that it will be interesting to see how the sale goes.

The political changes taking place in Eastern Europe do not, as yet, seem to have affected the arms and armour market except for a few Russian army caps and hats. This is perhaps a little surprising; there must be a stock of good quality pieces stashed away on the other side of the crumbling Wall, but as yet little seems to have come over to the West. Maybe there is some quiet digging being done by the dealers and auction house, which may yet repeat the flood of material that flowed into the country after India gained its independence. Further developments are awaited with interest.

Frederick Wilkinson

1940 SPECIAL ISSUE INTRODUCTION & ACKNOWLEDGEMENTS

This special issue of 'Military Illustrated' would have been impossible to prepare without the help and encouragement of many enthusiastic supporters. I have never professed to be an expert on uniforms — in the past I have concentrated on more general aspects of military history — but I have always been fascinated by the clothing and equipment of my favourite period. Therefore I have relied upon the advice of individuals with a much deeper knowledge than myself of uniform and insignia intricacies. I must stress that if there are any errors, no one is to blame but myself.

This publication is the first ever attempt to concentrate on the clothing and equipment aspect of the Battle of Britain and some other main campaigns of 1940, and to bring it to life with the help of modern photography and a band of unselfish collectors who are tirelessly keeping the past alive. I salute their dedicated enthusiasm; and thank them for allowing their collections to be gathered together from all over the country, and for giving up their spare time to help 'model' their kit. A huge amount of organisation goes into a project of this size and complexity; as I not only wrote the text but also organised and photographed all the period 'recreations', I am especially indebted to the following, who went beyond the call of duty to ensure that the 1940 Special appeared:

Firstly I would like to single out Richard Ingram of Sabre Sales, Southsea, Hants., for being my guide and mentor throughout the preparation of this publication. He not only gave me much authoritative advice, but was also my principal model. I also extend my most sincere thanks to: Jonathan Heyworth; Richard Windrow; Darren Steed; F.K. Mason; Charles Messenger; Vicky Thomas; François Vanvillier; Ian Everest, of Lewes District Council, for permission to take photographs at Fort Newhaven; the Fort Newhaven Military Display Team — Richard and Christine Hunt (special thanks), Michael Larkin, Neil Thomas, Jim Daly, David Wickens, and Terry Voisey.

Mike Llewellyn of the Kent Battle of Britain Trust at Hawkinge generously allowed us not only to use the ex-Fighter Command airfield at Hawkinge for photography, but also to photograph RAF and Luftwaffe uniforms from his extraordinary museum collection — I am especially grateful for Mike's patience on what must have been a very trying Sunday.

Thanks also to the management and staff of the Keighly & Worth Valley Light Railway, Haworth, West Yorkshire. Last but not least, I would like to thank my northern mit who got together on a cold winter weekend in Yorkshire: Mick and Kath Sparkes, Colin Wright, Gary Hancock, and Mark Taylor.

Arthur Ward

Video Releases to Rent:

'Red Scorpion' (Vestron:18)
'Battle Rats' (RCA/Columbia:18)
'Leathernecks' (VPD:18)
'Jackknife' (Vestron:18)
'Distant Thunder' (CIC:15)
'Operation Paratrooper' (Medusa 18)

Several releases described this month are typical of the increasing number of war movies exploiting recent or current world conflicts. In Joseph Zito's *Red Scorpion* (1988), Russian Spetsnaz Lt. Nikolai (Dolph Lundgren), a 'perfect killing machine', is sent to a fictional African country to infiltrate a black guerrilla movement and assassinate its leader. However, once he has witnessed the evils perpetrated by Cuban forces and their Russian advisors, the conscience-stricken Nicolai decides to change sides and fight for the oppressed. The South African government supplied the American production company with both soldiers and the use of studios of an army media centre in Windhoek, Namibia. Equipment on loan included South African Samil troop transports and Casspir and Buffel armoured personnel carriers, along with Russian equipment including a T-34 tank and a Hind helicopter captured in Angola. Director Joseph Zito was also responsible for such questionable movies as *Invasion USA* (1984), about a Communist invasion of America, and *Missing in Action* (1985), a revisionist view of the Vietnam War starring Chuck Norris. With dialogue like 'Let's kick some ass' from our Spetsnaz hero, *Red Scorpion* obviously aims no higher.

Briggs Benjamin Sr.'s *Battle Rats* (1989) is an attempt to create a drama about the 'Tunnel Rats', the highly-trained US Army squads that explored the complex Viet Cong tunnel systems during the Vietnam war. At the beginning, the American fail to understand why notorious Viet Cong commander Van Dram (Louie Katana) consistently eludes capture. Captain Rosenblatt (Coryn Sperry) orders the massacre of innocent villagers in reprisal for the mounting American casualties. However, the search of a village results in the discovery of a tunnel network. Volunteers, including Sergeant Bruce Burns (Jack Gilbert), undergo the necessary training before entering the tunnels in an operation designed to destroy Van Dram and his command. The story clearly provided the opportunity to create a Vietnam action film which required only a minimum of extras and resources. The frequent firefights, stages in tunnels which the Viet Cong have fortuitously fitted with electric lighting, rapidly becomes tediously repetitive. Readers of 'MI' who have read Tom Mangold and John Penycate's classic book *The Tunnels of Cu Chi* will appreciate that a far more intelligent and gripping film remains to be made about an almost unbelievable conflict.

Viet Cong tunnels also feature in Paul D. Robinson's *Leathernecks* (1988). The plot, which curiously bears no resemblance to that described on the sleeve, concerns Special

ON THE SCREEN

Forces defending a fortified village against Viet Cong assaults. Although poorly scripted and acted, this low-budget Italian production is marginally better than the same director's *The Last Platoon* (reviewed in 'MI' No. 24). Richard Hatch again leads the cast, this time supported by James (son of Robert) Mitchum.

Three releases deal with the lasting effects of the Vietnam war on returned veterans; although none are war movies, all three feature brief Vietnam flashbacks. David Jones' *Jackknife* (1989) has a screenplay by Stephen Metcalfe, based on his own play *Strange Snow*. Ed Harris plays a mentally disturbed veteran who cannot cope with the growing relationship between his sister and former comrade (Robert de Niro). The film was released theatrically in Britain, and featured excellent performances from the leading players. In Rick Rosenthal's *Distant Thunder* (1988), Mark Lambert (John Lithgow), haunted by memories of an ambush in North Vietnam that all but wiped out his command, seeks refuge from civilisation with other veterans in a remote forest. This, too, is sensitively scripted and acted.

Unfortunately, the same is not true of Frank de Palma's low-budget thick-ear drama *Operation Paratrooper* (1988), set in an American Army base in Italy but filmed in Yugoslavia. Young US paratrooper Phil Cooper (Martin Hewitt) is forced into a duel with Sergeant Vince Rayker (Joe Dallesandro), who, deranged by his experiences in a Viet-Cong POW camp, has assassinated a senior officer involved in illegal arms-dealing.

Video Releases to Buy:

'Rambo III' (Guild:18)
'Iron Eagle II' (Guild:PG)

The withdrawal of Russian forces from Afghanistan made Peter MacDonald's *Rambo III* (1988) an anachronism even before its theatrical release in this country. Rambo (Sylvester Stallone) travels to Afghanistan to rescue Colonel Trautman (Richard Crenna), his mentor and father-figure, who has been captured by a sadistic spetsnaz commander while attempting to deliver Stinger missiles to the local Mujahideen rebels. Rambo, as usual, succeeds in disposing of hordes of Russians in increasingly preposterous action sequences. The film does have some striking visuals, and a good score by Jerry Goldsmith, but it is dispiriting to realise that so much in the way of resources and talent was wasted in making such a crudely propagandastic movie.

Thick-ear action takes to the air in a release concerning the exploits of US Air Force pilots in the Middle East. In Sidney J. Furie's *Iron Eagle II* (1988), Colonel Charles 'Chappy' Sinclair (Louis Gossett Jr.) commands a joint Soviet/American air-strike on a nuclear missile site built by an Arab country that is threatening stability in the Middle East. The basic unbelievability of the story is mitigated to some extent by some remarkable aerial photography by Clay Lacy, who also worked on *Top Gun*.

Stephen J. Greenhill

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Europe Ablaze

The year 1940 opened for Britain and France in the apprehensive calm of the 'Phoney War'. In the coldest winter for many years the French Army and the five Regular divisions of the British Expeditionary Force faced the German Wehrmacht across the French border — much of it protected by the massive static defences of the Maginot Line — and across neutral Holland and Belgium in the north. On land, activity was limited to patrol encounters in the snow; there was sporadic naval activity, little of it encouraging for the Royal Navy; and the RAF was discovering the cost of small-scale daylight raids, largely on German coastal targets. In Britain the depredations of the U-boats had already shown the justification for rationing of food and most consumer goods. Large-scale bombing of urban targets was greatly feared, as was chemical warfare; civilians, reminded of the imagined danger by the requirement to carry gasmasks at all times, were dying nightly in the accidents inevitably caused by the 'black-out' of all external lighting. The long-delayed opening of decisive operations contributed to a mood of nervous uncertainty.

January-February

Three British Territorial divisions crossed to France. On 16 January Hitler postponed his attack on the West, planned for the 17th, after an aircraft carrying details of the original plan ('Yellow') for an offensive through Holland and Belgium crashed behind Allied lines.

March

Hitler adopted the modified plan, 'Sickle', advanced by Von Runstedt and Von Manstein: the attack through the Low Countries would now be a secondary effort to draw the Allies forward, while the main 'left hook' struck up through the Ardennes — unprotected by the Maginot Line because it was believed the wooded hills were impassable for a motorised army.

Both Allied and German plans for expeditions into Norway were finalised; the Germans sought to secure, and the Allies to deny, German supplies of Swedish iron ore passing through Norway.

April-May

Hitler moved first, invading Denmark and Norway on 9 April; the Danes were forced

to surrender on the second day. After Royal Navy victories in Narvik Fjord ill-prepared and ill-equipped British forces landed at Narvik, Namsos and Aandalesnes between 15 and 18 April, followed by French and Polish troops between 24 April and early May. They failed to dislodge German troops from these three towns. (Limited success in late May was overshadowed by events in France, and the Allies withdrew on 3-8 June.)

THE BATTLE OF FRANCE

May

On the 10th Hitler unleashed his attack on the Low Countries and France. The BEF and three French armies advanced into Belgium, to the Dyle-Meuse line. Neville Chamberlain resigned; Winston Churchill became Prime Minister of a national coalition government.

Innovative German tactics were a classic demonstration of the use of mechanised armies with close air co-operation. Airborne spearheads seized vital communications

junctions and neutralised important fixed defences. Tank columns raced ahead, exploiting every success and leaving infantry to mop up in their wake. Fighters and bombers gave direct support to leading ground elements. Although large, the French Army relied too much on fixed defences, and had a cumbersome command structure; much of its strength was quickly outflanked and demoralised. Allied armour was too dispersed to achieve local superiority over the fast-moving Panzers; Allied aircraft were largely outperformed by German types, and their airfields were priority targets. Belgium and Holland were weak and poorly equipped.

On 12-13 May Army Group A's leading elements crossed the Meuse each side of Sedan, and the bridgehead was quickly expanded despite Allied air attacks. On the 15th Holland was forced to surrender. On the 16th German armour began to force a 50-mile wedge into Belgium, crushing the French 9th Army and isolating the 7th Army and the BEF north of the salient. Falling back, they were continually outflanked to the south.

On the 17th Brussels fell; on the 18th, Cambrai; on the 20th tanks reached the mouth of the Somme, cutting the Allies in two. Counter-attacks failed south and north of the salient, and the Wehrmacht turned north to the Channel ports, taking Boulogne on the 25th and Calais — after a desperate British defence — on the 27th. Meanwhile the BEF and parts of the French 7th Army had withdrawn to Dunkirk. On the 26th their evacuation to England began, by naval units and a motley fleet of volunteer civilian craft. On the 28th Belgium surrendered.

June

By the 3rd the Dunkirk evacuation had rescued 338,226 men, of which some 225,000 were British, the rest French. Some 140,000 British remained in France: the 51st Highland Div. was trapped to the south under French

command, and three new divisions were sent over from England to Cherbourg and Brest between 23 May and 11 June (a second evacuation would rescue some 136,000 of them, with 20,000 French, Belgians and Poles, from various ports). The French armies were defeated in heavy fighting over the next two weeks; the Germans took Paris without a fight on the 14th. On the 22nd, France signed an armistice.

THE BATTLE OF BRITAIN

July

Invasion of Britain appeared inevitable. The loss of almost all the BEF's equipment led to frantic efforts to scrape together forces capable of challenging landings on the south-east coast. The population of coastal areas were evacuated, and defences improvised.

Hitler made public offers of an armistice, while reviewing the invasion plans. Army Group A, with 13 ground and two airborne divisions, would land on a broad front; Operation 'Sealion' was provisionally set for 15 September. While barges were gathered, air attacks on Channel shipping and ports intensified. Radar, of which the Germans were ignorant, allowed the hard-pressed RAF Fighter Command to make focussed responses; but Channel shipping was all but halted, and the Royal Navy was forced to leave Dover.

August

The Luftwaffe was ordered to achieve the air superiority without which the invasion could not succeed. After further heavy air fighting over the Channel (8-11 August) a major offensive was planned for the 13th — 'Eagle Day' — against RAF airfields, forcing Fighter Command either to come up in force to defend them (and thus be destroyed) or to abandon them, pulling back from the invasion front. On the 13th 1,485 German sorties were flown; RAF losses were about 15, German about 40, including many Ju87 Stukas, which proved very vulner-

able. On the 15th heavy raids from France and Norway cost about 80 German aircraft, about 35 RAF. German fighters were ordered to stay in close escort to the bombers from now on, at a cost in mobility.

RAF airfields were now being damaged, and although aircraft losses still favoured the defenders by a ratio of about six to four, British pilot losses (106 in two weeks) could not be replaced quickly enough, and surviving aircrew were beginning to show signs of exhaustion. After the respite of four days' bad weather savage fighting resumed on the 24th, and continued almost daily until 6 September. The loss ratio was by now almost equal; British aircraft production was falling behind, the last reserves of pilots had been scraped together, and heavy damage to airfields was disrupting command and control.

September

Although other cities had been bombed, London had deliberately been spared. On the night of 24 August bombs were dropped on the capital in error; and on the next night, by the RAF on Berlin. The Luftwaffe was ordered to retaliate, to break British morale; and from the 7th major daylight and night raids were mounted on London. Daylight losses on both sides were heavy; but the increased distance seriously cut the German escort fighters' time over target, and the respite for the battered RAF airfields was invaluable.

On the 10th Hitler ordered 'Sealion' postponed to the 24th. On the 15th a major daylight raid on London was successfully intercepted; 58 Luftwaffe and 26 RAF aircraft were destroyed, but the cumulative effect was more important than the immediate ratio. Consistently accurate interception (thanks to radar) and a steady attrition of 50-plus aircraft a day eroded German morale. It was clear that air superiority was beyond their reach. City raids killed civilians and burned factories, but did not



damage the fabric of the defences; meanwhile, RAF night raids on Channel ports were destroying precious invasion barges. On 17 September Hitler postponed 'Sealion' indefinitely. Daylight raids continued during September and October, but the RAF's strength steadily recovered.

The Battle of Britain cost Germany some 1,880 aircraft and 2,660 aircrew. RAF losses were about 1,020 aircraft and 520 pilots, out of just under 3,100 pilots engaged.

THE NIGHT BLITZ

Between 7 September and 12 November there was only one night on which London was not bombed — nearly 60 major raids hit the capital alone, and others savaged Birmingham, Manchester, Liverpool, Coventry, Sheffield, Southampton, Portsmouth, Plymouth, Bristol, Cardiff and Glasgow, among other targets. This routine of nightly bombing claimed tens of thousands of lives and made hundreds of thousands homeless in Britain's industrial and port cities by the close of the year.

Without airborne radar there was virtually no effective defence against night raids. Some 1,097 night fighter sorties were flown during November and December, yet only some 15

enemy aircraft were destroyed; anti-aircraft guns added some 40 kills to this total.

Typically, raids involved between 150 and 300 bombers, though some nights brought only about 80, and some as many as 400. It was almost unheard of for more than one or two to be shot down in a night, if any. They dropped a total, between July and December, of 40,885 tons of bombs (of which 26,364 tons fell on London alone); in this period civilian dead totalled some 23,000, with another 32,000 wounded — nearly 5,000 were killed and more than 6,000 wounded in the first three weeks of November.

Two of the worst raids were on Coventry, 14/15 November, and the City of London, 29/30 December. At Coventry nearly 450 bombers, led by pathfinders dropping incendiaries, dropped 400-plus tons of high explosive and 56 tons of incendiaries. Some 380 civilians were killed and 800 wounded; about a third of the city's homes were made uninhabitable; 21 factories (including several vital to the war effort, on which individual German squadrons were targeted) were destroyed; all rail links were cut; and some 500 retail businesses were destroyed.

The incendiary raid on the

City of London, 29/30 December, was its worst night since the Great Fire of 1666. Only about 130 bombers, carrying incendiaries almost exclusively, bombed the City for three hours — deteriorating weather saved London from another six hours' planned bombing, but even so the damage was stunning. Six huge 'conflagrations' were started, and 16 other 'major fires'; these terms conceal, e.g., a single 'conflagration' in the Fore St. area which 200 fire appliances were forced to abandon to burn itself out — a 'conflagration' could mean a square half mile of solid flames.

As the year 1940 drew to its close London and Britain's other major cities faced another four months of regular night bombing (the last heavy night raid, on 10/11 May 1941, would be the worst of all, making a third of the streets of Greater London impassable and killing or maiming nearly 3,300 people). A year which had opened with a strong democratic alliance confidently facing an enemy confined inside his own borders ended with the alliance destroyed, the enemy cruising Britain's night skies at will, and the country facing the conqueror of two-thirds of Europe alone.

The British Army, 1940

The end of hostilities in the Great War led to an inevitable and almost immediate desire among all the combatant nations to seek an end to warfare on the scale experienced since 1914. The economies of the European belligerents were exhausted, their armies bled white and their people desperate for peace. Continued public expenditure on armies, navies and air forces was a political impossibility; drastic cuts in manpower and material were implemented as soon as the Armistice was secured. In Britain throughout the 1920s and early 1930s all the services clamoured for their share of the limited defence budget.

Left:

Military Police sergeant astride a Norton motor-cycle in 1940; like many non-front line troops he still wears the Service Dress uniform, basically unchanged since before the Great War. The steel helmet is slung in one of the approved positions, behind his shoulder. The MPs were one of the corps which retained the SD cap when most of the Army went into the FS cap. (IWM)



Above right:

Lance-Corporal Langley of the Royal Armoured Corps passes out from a tank training depot 'somewhere in England', 1940. He wears 1937 Battledress, serge (note trouser tabs worn by WOs at left) and 1937 webbing equipment in Field Service Marching Order. For non-infantry troops the universal pouches were normally replaced by the double 'cartridge carriers' worn here by Langley — a pair of small pouches each holding ten rounds, on each side of the belt. Note black-on-khaki slip-on 'R.A.C.' shoulder title; 1908 large pack on back; rolled anti-gas cape, its quick-release cord tied off to the gasmask case buckle; and haversack worn on left hip attached to the brace ends. (IWM)

The Army underwent rigorous pruning of its strength, notably the disbanding of the Machine Gun Corps in 1922, the removal from the establishment of five Southern Irish regiments (due to the grant of Home Rule) and the dismantling of ten regular infantry battalions. Efforts to update and modernise the British Army were few and far between; but steps were taken to aid its mobility, primarily by the development of vehicles like the Carden-Lloyd carriers which appeared at the end of the 1920s.



It was the rise in influence, and in 1933 to total authority, of Adolf Hitler that encouraged a general realisation that the British Army was dangerously out-of-date. The rapid militarisation of the Third Reich encouraged the Government to allocate more resources to the armed services and introduce reforms in both organisation and equipment.

The greatest change in the organisation of the British Army was the almost total removal of horses from the establishment in favour of mechanisation. While infantrymen were still destined to spend a good deal of time foot-slogging, the general objective — as embodied in the official 1937 pamphlet 'Infantry Training — Training and War' — was to achieve a degree of mobility hitherto unknown in the Army. From experience gained primarily on the North-West Frontier steps were taken to exploit the advantages of the new generation of armoured fighting vehicles coming into service. The theory was fine;

but little thought was given to the practicalities of moving infantry quickly enough to support armoured formations, as only the carrier platoons and reconnaissance units were truly mobile.

One of the most glaring deficiencies, and one which proved a critical flaw during the fighting in France, was in the area of communications. Incredibly at a time when radio technology was commonplace, the British Army relied upon such antiquated equipment as heliographs, signal lamps and flags and, at best, field telephones utilising the six miles of cable with which each battalion was issued. Units had no access to radio at all. Not surprisingly, in action the chain of command was frequently severed.

UNIT STRUCTURE

The structure of the British Army was also altered to suit what were considered to be the likely requirements of modern warfare. Generally the move was towards smaller operational units pos-

sessing much greater firepower than previous units of equivalent size.

Army corps were still divided into divisions, which were in turn made up of brigades consisting of three infantry battalions (or in the case of armoured divisions, three regiments); but the divisions themselves were reduced in size and split into two classes — motorised, based on the light machine-gun; and mechanised ar-

moured divisions based on the tank.

The motorised (or infantry) division consisted of nine battalions (against a traditional 12). Each battalion was equipped with 50 Bren light machine-guns, along with the standard infantry weapon, the .303in. SMLE rifle. The average strength of an infantry battalion was 780 all ranks, in the usual battalion headquarters (but the old 'headquarters wing' had been

changed to a headquarters company) and four rifle companies. Each company consisted of four platoons, but each platoon had been reduced to three sections from four previously. Each platoon was equipped with three of the accurate and efficient Brens, and with one cumbersome and underpowered Boys anti-tank rifle and a light 2in. mortar in the platoon HQ (there were only two 3in. mortars in each

battalion).

The 'carrier platoon' attached to HQ company was a major innovation; it consisted of ten armoured tracked carriers each equipped with Bren guns or Boys rifles. Used for reconnaissance and outpost duties, the 'Bren gun carriers' were fast and offered good flank protection and mobile fire-support.

The division's infantry battalions were supplemented by two other kinds: the machine-gun battalion, equipped with 48 belt-fed Vickers .303in. medium machine guns; and the motor-cycle battalion, equipped with 11 scout cars, 99 motor-cycle combinations and 43 standard motor-cycles.

Battalion transport was based upon the Humber 8cwt., Bedford 15cwt. and Bedford 30cwt. general service lorries.

Armoured divisions consisted of mechanised cavalry regiments (equipped with armoured cars or Light tanks), and Royal Tank Regiment battalions (equipped with a range of tanks of the Light, Cruiser and Infantry types — of which the Matilda II (A12) was by far the best, and the only AFV that matched the best German Panzers.

The Artillery was also subject to reorganisation. Field batteries now consisted of 12 guns each (in theory, the powerful 25-pounder, although in practice summer 1940 would find a crazy mixture of 12-pdrs., 13-pdrs., 18-pdrs. and 4.5in. howitzers still in use). Artillery also inherited the 2-pdr. anti-tank gun from the infantry, a weapon which was by 1940 totally inadequate for its intended purpose. Anti-aircraft and light anti-aircraft regiments were equipped with the 3.7in. AA gun and the 40mm Bofors gun respectively.

Reconstruction: front and rear views of the 1937 webbing set in Battle Order; worn with 1937 Battledress, hessian-covered Mk.II steel helmet, FS cap, gasmask case, and anti-gas cape. Note absence of entrenching tool at this date; and characteristic grubby marks on the gasmask satchel, caused by pressure of reinforcing rings of filter canister inside.



The Army in 1939-40

By April 1939 the strength of the Regular Army stood at 224,000, that of the Territorial Army at 325,000, and of the Anti-Aircraft Units (Territorial Army) at 96,000 — a total of 645,000 men under arms. From April 1939 conscription into the Militia yielded 34,000 new recruits, and the TA swelled its ranks by a further 36,000 men. Men listed on the Army Reserve and Supplementary Reserve added a further 150,000 to the ranks. On 3 September 1939 the total strength of all formations stood at 865,000 men. Three days later by Act of Parliament the Militia, Territorial Army and other auxiliary forces were officially classified under one name, the British Army.

Though a large and ostensibly formidable force, the British Army was still ill-prepared for combat on the modern battlefield. During large-scale exercises in 1939 observers (including the German military attaché) were astonished to see a vast array of different coloured flags employed to represent units or items of equipment which were not yet available. Troops used gas-rattles to simulate gun-fire, many personnel carriers sported painted reminders that they were un-armoured versions 'not to be used in action', and anti-tank guns were mocked up out of wood and lengths of piping. Few infantrymen were equipped with the new 1937 pattern Battledress and personal equipment — most still wore 1914-18 style Ser-

vice Dress. Transport and signals were woefully inadequate.

Nevertheless, the initial force of 160,000 men that accompanied Lord Gort to France by 27 September 1939 was declared to be a well equipped and well trained force capable of facing the best the enemy might throw at it. Just how ill-prepared Britain really was is evident by the fact that the only fully-equipped British Armoured

Division, the 1st, lost 1,200 tanks in the fighting in France — virtually all the armour the nation possessed; and by the fact that an élite formation like the 51st Highland Division was sacrificed to the tide of the German onslaught and captured *en masse* at St Valéry — 8,000 British troops destined for years of weary imprisonment.

After Dunkirk, Britain's defences were perilously weak. The RAF had taken a

battering in France; the Royal Navy was overstretched in its efforts to safeguard the nation's supply lines; but it was the Army that suffered most — not just in casualties, but also because nearly all its equipment had been abandoned in France. To this day recriminations abound as to who gave the order to destroy so much equipment that might have been saved. Whatever the source, the result was decisive — for



Reconstruction: Battle Order worn over the Dismounted Troops' Greatcoat of post-April 1939 double-breasted design; and an unobscured view of the brown leather jerkin. Pre-August 1937 General Service (Royal Arms) buttons were worn on the greatcoat; after that date regimental or corps designs were authorised, although wartime conditions led to many coats being worn in mits with GS buttons. The brassards worn on both arms are chemically-impregnated paper, of a chocolate brown shade, which changed colour in the presence of gas. Pre-war helmets often show a chocolate brown 'satin' paint finish; wartime issue were normally painted grey-green with a matt sanded finish.

weeks afterwards there were barely enough rifles and machine-guns and almost no anti-tank weapons to equip Britain's defenders. A German invasion attempt was deemed imminent; the British Army was home, but it was far from safe.

UNIFORMS AND EQUIPMENT

Although the defeat of the BEF in France might suggest the contrary, by the mid-

1930s military planners were re-organising the British Army to prepare it for a future war which, they predicted, would be characterised by mechanisation and mobility. To meet the demands of a high-speed battlefield, new personal equipment was required to provide the infantryman, especially, with the best tools for the job. Unfortunately, despite good intentions, not all the reforms offered signifi-



cant improvements over the 'out-dated' designs employed during the Great War. Nevertheless, the British soldier of 1940 vintage looked quite different from his predecessor of 1914 and, in terms of firepower, the platoon was a more formidable adversary.

The key reforms in British Army uniforms and personal equipment which were finalised in 1937 were largely a result of investigations by the Braithwaite Committee, to find a replacement to the khaki Service Dress which dated from 1907 (though amended slightly during subsequent years) and the 1908 pattern webbing infantry equipment. The trusty service rifle, the SMLE No.1 Mk.III which had provided sterling service during the Great War and inter-war years, was also to be replaced by a redeveloped version, the No.4, with a shorter and more manageable bayonet.

After studying the merits of a variety of uniform styles

Above:

A platoon commander of 2/4th Bn., King's Own Yorkshire Light Infantry with 138 Bde., 46th Division inspecting his men — who wear 'skeleton order' webbing, without haversacks — near Lille during the 'Phoney War' period. Regiments which traditionally wore badges of rank in non-standard colours were permitted to retain these; those of the KOYLI were dark green on a white ground, as worn by this sergeant. Note that he also wears the officially forbidden metal shoulder titles. Both he and his officer (who wears metal badges of rank, and collar badges, both officially forbidden) also wear the regiment's special double lanyard for officers and SNCOs: dark green, with a prominent whipped section, and two ends, one passing into each breast pocket. (IWM)

Left:

Reconstruction: 'Shirtsleeve order' required the sleeves of the collarless khaki angola shirt to be rolled neatly. Note here the trouser belt loops identifying 1937 pattern BD. Privately purchased belts were worn; one sign of an 'old sweat' was a sturdy leather belt adorned with regimental cap badges collected during long service.



Above:

Troops of one of the battalions of the Border Regiment, 42nd Division, during the retreat to Dunkirk. They display no insignia of any kind. (IWM)

Centre:

Men of a cavalry regiment pause in a French lane. Their BD and helmets are general issue; only the long-strapped RAC thigh holster identifies them as armoured crews. The RTR in France wore their traditional white tank badge on the upper right sleeve. (IWM)

and arrangements of equipment carriers, the War Office settled on the famous '37 pattern Battle Dress and '37 pattern web equipment. Although the familiar Mk.I 'battle-bowler' or shrapnel-helmet had revealed serious shortcomings during the latter part of the Great War (especially against horizontally travelling missiles) its Mk.II replacement of 1938

was essentially unchanged, and in fact was not phased out until late 1943 when the first batch of the new Mk.III helmets was issued.

Battledress, Serge

Although the first pattern of Battledress dates from 1937 it did not completely replace Service Dress until the spring of 1940. Some non-infantry troops of the BEF still wore Service Dress during the Battle of France, but after Dunkirk Battledress was ubiquitous. Although the second manufacturing pattern was known as the '1940' or 'utility' pattern it was not issued until 1942, therefore we are only concerned here with the original 1937 design. (Its labels do not bear the date, but only 'Battledress, Serge'.)

After investigating the merits of a variety of materials, mainly denim based, the War Office settled on drab (khaki) serge material as offering the best combination of durability and protection from the temperate North European climate. Battledress consisted of a two-part combination of blouse and trousers. Designed before the restrictions of a wartime economy demanded a more utilitarian approach, the 1937 pattern is distinguished by details such as 'fly fastening' of the blouse front and pockets which concealed costly brass buttons; pocket pleats; an unlined collar; trouser belt loops, and buttoning tabs at the trouser ankles.

The tedious job of winding puttees around the bottom of trouser legs was replaced by the use of webbing anklets cut to follow the contours of the standard black leather 'ammunition boot', fastened by a double strap and buckle arrangement.

A new form of headgear, the Universal Pattern Field Service Cap, was introduced at the same time as Battledress. Manufactured in the same drab serge material for Other Ranks and in fine quality baratheia for officers, the FS cap was worn at a jaunty angle on the right side of the wearer's head, the front of the

cap being neatly positioned above the right eye. There was a 'curtain' or turned up flap all round, and a small turned-up peak, which could in theory be folded down to give some neck and face protection in bad weather; in practice it was very rare to see this done. Certain units (notably Scottish regiments) retained instead cherished 'tribal' headgear. At their own expense, all ranks of most units could also wear regimentally-coloured FS caps, for informal and off-duty occasions only.

INSIGNIA

The fundamental idea behind the introduction of Battledress was to achieve uniformity and anonymity among combat troops. Officers and men were to wear the same functional uniform, thereby to some degree protecting the senior ranks by anonymity in the face of the enemy. There was also the advantage, to a certain kind of official mind, of doing away with the numerous individual interpretations of Dress Regulations then in force. In keeping with this doctrine, insignia on BD were to be kept to the absolute minimum.

Officially, from the introduction of BD in March 1938 troops were forbidden to wear metal regimental titles on BD shoulder straps; but photos show much disobedience of this order, including examples with the BEF in France. From the outbreak of hostilities in 1939 'slip-on' titles were introduced; these were rectangles of khaki worsted, with an elastic loop behind, and bearing unit or corp titles or abbreviations in black cotton embroidery; looped over the shoulder strap and worn at its outer end, they were economical to make and easy to remove for field security. Only the Guards retained embroidered, coloured titles worn in an are at the top of the sleeve.

The only metal insignia approved for wear with BD were regimental cap badges worn on the front left of the FS cap.

THE BRITISH EXPEDITIONARY FORCE 1939-40

Only infantry and armoured units are listed here: each Corps and Division also included artillery, engineer, signals, and many other supporting arms and services.

C-in-C: Gen. Lord Gort, VC
C.G.S: Lt. Gen. H. R. Pownall

GHQ Troops

12th Royal Lancers
4/7th Royal Dragoon Guards
5th Inniskilling Dragoon Guards
13/18th Royal Hussars
15/19th King's Royal Hussars
1st Fife and Forfar Yeomanry
1st East Riding Yeomanry
4th and 7th Royal Tank Regiment

First Corps

(Lt. Gen. M. G. H. Barker)
1ST DIVISION
(Maj. Gen. Hon. H. Alexander)
1st Guards Brigade
3rd Bn Grenadier Guards
2nd Bn Coldstream Guards
2nd Bn Hampshire Regiment
2nd Infantry Brigade
1st Bn Royal Regiment
2nd Bn North Staffordshire Regiment
6th Bn Gordon Highlanders
3rd Infantry Brigade
1st Bn Duke of Wellington's Regiment
2nd Bn Sherwood Foresters
1st Bn King's Shropshire Light Infantry
2ND DIVISION
(Maj. Gen. H. C. Lloyd)
4th Infantry Brigade
1st Bn Royal Scots
2nd Bn Royal Norfolk Regiment
1/8th Bn Lancashire Fusiliers
5th Infantry Brigade
1st Bn Queen's Own Cameron Highlanders
2nd Bn Dorsetshire Regiment
6th Infantry Brigade
1st Bn Royal Welsh Fusiliers
1st Bn Royal Berkshire Regiment
2nd Bn Durham Light Infantry
48TH DIVISION
(Maj. Gen. A. F. A. N. Thorne)
143rd Infantry Brigade
1st Bn Ox. & Bucks. Light Infantry
5th Bn Royal Warwicks
1/7th Bn Royal Warwicks
144th Infantry Brigade
2nd Bn Royal Warwicks
5th Bn Gloucestershire Regiment
8th Bn Worcestershire Regiment
145th Infantry Brigade
2nd Bn Gloucestershire Regiment
4th Bn Ox. & Bucks. Light Infantry
1st (Buckinghamshire Bn) Ox. & Bucks. Light Infantry

Second Corps

(Lt. Gen. A. F. Brooke)
3RD DIVISION
(Maj. Gen. B. L. Montgomery)
7th Guards Brigade
1st Bn Grenadier Guards
2nd Bn Grenadier Guards
1st Bn Coldstream Guards
8th Infantry Brigade
1st Bn Suffolk Regiment
2nd Bn East Yorkshire Regiment
4th Bn Royal Berkshire Regiment
9th Infantry Brigade
2nd Bn Lincolnshire Regiment
1st Bn King's Own Scottish Borderers
2nd Bn Royal Ulster Rifles
4TH DIVISION
(Maj. Gen. D. G. Johnson)
10th Infantry Brigade
2nd Bn Bedfordshire Regiment
2nd Bn Duke of Cornwall's Light Infantry
6th Bn East Surrey Regiment
11th Infantry Brigade
2nd Bn Lancashire Fusiliers
1st Bn East Surrey Regiment
5th Bn Northamptonshire Regiment
12th Infantry Brigade
2nd Bn Royal Fusiliers
1st Bn South Lancashire Regiment
6th Bn Black Watch
50TH DIVISION
(Maj. Gen. Le. Q. Martel)
150th Infantry Brigade
4th Bn East Yorkshire Regiment
4th Bn Green Howards
5th Bn Green Howards
151st Infantry Brigade
6th Bn Durham Light Infantry
8th Bn Durham Light Infantry
9th Bn Durham Light Infantry
25th Infantry Brigade
1/7th Bn Queen's Royal Regiment
2nd Bn Essex Regiment
1st Bn Royal Irish Fusiliers
Third Corps
(Lt. Gen. Sir R. F. Adam)
42ND DIVISION
(Maj. Gen. W. G. Holmes)
125th Infantry Brigade
1st Bn Border Regiment
5th Bn Lancashire Fusiliers
6th Bn Lancashire Fusiliers
126th Infantry Brigade
1st Bn East Lancashire Regiment
5th Bn King's Own Royal Regiment
5th Bn Border Regiment
127th Infantry Brigade
4th Bn East Lancashire Regiment
5th Bn Manchester Regiment
1st Bn Highland Light Infantry
44TH DIVISION
(Maj. Gen. E. A. Osborne)
131st Infantry Brigade
2nd Bn The Buffs
5th Bn Queen's Royal Regiment
6th Bn Queen's Royal Regiment
132nd Infantry Brigade
1st Bn Queen's Own Royal West Kent Regiment

4th Bn QO Royal West Kent Regt.
5th Bn QO Royal West Kent Regt.
133rd Infantry Brigade
2nd Bn Royal Sussex Regiment
4th Bn Royal Sussex Regiment
5th Bn Royal Sussex Regiment
GHQ Reserve
5TH DIVISION
(Maj. Gen. H. E. Franklyn)
13th Infantry Brigade
2nd Bn Cameronians
2nd Bn Royal Inniskilling Fusiliers
2nd Bn Wiltshire Regiment
17th Infantry Brigade
2nd Bn Royal Scots Fusiliers
2nd Bn Northamptonshire Regiment
6th Bn Seaforth Highlanders
12TH DIVISION
(Maj. Gen. R. L. Petre)
35th Infantry Brigade
2/5th Bn Queen's Royal Regiment
2/6th Bn Queen's Royal Regiment
2/7th Bn Queen's Royal Regiment
36th Infantry Brigade
5th Bn The Buffs
6th Bn QO Royal West Kent Regt.
7th Bn QO Royal West Kent Regt.
37th Infantry Brigade
2/6th Bn East Surrey Regiment
6th Bn Royal Sussex Regiment
7th Bn Royal Sussex Regiment
23RD DIVISION
(Maj. Gen. A. E. Herbert)
69th Infantry Brigade
5th Bn East Yorkshire Regiment
6th Bn Green Howards
7th Bn Green Howards
70th Infantry Brigade
10th Bn Durham Light Infantry
11th Bn Durham Light Infantry
1st Bn Tyneside Scottish
46TH INFANTRY DIVISION
(Maj. Gen. H. C. Curtis)
137th Infantry Brigade
2/5th Bn West Yorkshire Regiment
2/6th Bn Duke of Wellington's Regiment
2/7th Bn Duke of Wellington's Regiment
138th Infantry Brigade
6th Bn Lincolnshire Regiment
2/4th Bn King's Own Yorkshire Light Infantry
6th Bn York & Lancaster Regiment
139th Infantry Brigade
2/5th Bn Leicestershire Regiment
2/5th Bn Sherwood Foresters
9th Bn Sherwood Foresters
51ST INFANTRY DIVISION
(Maj. Gen. V. M. Fortune)
152nd Infantry Brigade
2nd Bn Seaforth Highlanders
4th Bn Seaforth Highlanders
4th Bn Queen's Own Cameron Highlanders

153rd Infantry Brigade
4th Bn Black Watch
1st Bn Gordon Highlanders
5th Bn Gordon Highlanders
154th Infantry Brigade
1st Bn Black Watch
7th Bn Argyll & Sutherland Highlanders
8th Bn Argyll & Sutherland Highlanders
1ST ARMOURD DIVISION
(Maj. Gen. R. Evans)
2nd Armoured Brigade
The Queen's Bays
9th Royal Lancers
10th Royal Hussars
3rd Armoured Brigade
2nd Bn Royal Tank Corps
3rd Bn Royal Tank Corps
5th Bn Royal Tank Corps
1st Support Group
101st LAA Anti-Tank Regiment

To France after mid-May:
20th Guards Brigade (to Boulogne)
2nd Bn Irish Guards
2nd Bn Welsh Guards
5th Bn Loyal Regiment
30th Brigade (to Calais)
2nd Bn King's Royal Rifle Corps
1st Bn Rifle Brigade
1st Bn Queen Victoria's Rifles
52ND DIVISION
(Maj. Gen. J. S. Drew)
155th Infantry Brigade
7/9th Bn Royal Scots
4th Bn King's Own Scottish Borderers
5th Bn King's Own Scottish Borderers
156th Infantry Brigade
4/5th Bn Royal Scots Fusiliers
6th Bn Queen's Own Cameron Highlanders
7th Bn Queen's Own Cameron Highlanders
157th Infantry Brigade
1st Bn Glasgow Highlanders
5th Bn Highland Light Infantry
6th Bn Highland Light Infantry

Below:

The only berets worn in 1940 were the black regimental headgear of the Royal Tank Regiment; here a brigadier and a junior officer wear them in the turret of a Vickers Light Tank. The embroidered buff and brown rank 'pips' can just be seen to lack the later authorised coloured backing; such backings were in fact worn by some officers of infantry in France. (IWM)

Despite the noble intention of the War Office to achieve drab consistency, the British soldier quickly displayed not only his traditional tendency to ignore the rules, but also his stubborn reluctance to relinquish any dress or insignia.



Gunner of the re-formed 51st Highland Division crewing a 4.5in. howitzer, October 1940. The bits of tape and string argue a less than successful attempt to design a comprehensive set of field equipment to meet the needs of the contemporary battlefield. His anti-gas cape is held by broad tapes passing down in front of the shoulders, then back under the arms to cross in the centre, then forward to knot in front. The gasmask is held in 'alert' position by a cord. Gas detection brassards are worn; the cord round his right shoulder is unexplained. (IWM)

Below:

Sergeant, 2nd North Staffords, 1st Div.: Note large black regimental sleeve flash. (IWM)



ma peculiarities which were historically associated with aspects of regimental tradition, or which marked individual achievement. Consequently BD quickly began to sprout a whole variety of insignia, including metal badges of rank instead of the authorised cloth type; various coloured trade and proficiency badges; coloured unit 'flashes', and even divisional signs. The situation was compounded by the fact that most of these had been tolerated on the old Service Dress which many troops still wore early in 1940 alongside their comrades who had received BD.

The most blatant example was probably provided by the proud 51st Highland Division. Forbidden for security reasons to go to France with their prized Great War 'HD' shoulder patch, they adopted a coloured St. Andrew's Cross instead, worn above various



horizontal and vertical bars, colour and number indicating brigade and battalion in a system recalling the common practice of the Army of 1916-18. (No full explanation of this short-lived system, and very few individual battalion examples, have been reliably recorded.)

The authorities relent

As a result of all this freelance activity, the War Office issued in April 1940 an edict forbidding the use of divisional insignia on Battledress (Army Council Instruction No.419). But the argument rumbled on, with persistent recommendations from senior field commanders who knew the value to morale of such apparently trivial concessions; and the authorities were eventually forced to give way. The first major official concession was ACI

No.1118 of 18 September 1940, and once the dam had been breached a number of progressive amendments followed.

Officers' badges of rank were now enlivened by backing in arm-of-service colours; and all ranks would wear on their sleeves small strips of cloth in these colours. There were 21 combinations initially; examples were scarlet for Infantry, green for Rifles, yellow/red halved for the Royal Armoured Corps, red/blue for the Royal Artillery, blue/red for the Royal Engineers, blue/white for the Royal Signals, and so forth. In the infantry up to three strips might be worn depending on the seniority of the brigade within the division: one strip if the wearer's battalion served in the 'senior' brigade, two for the 'intermediate', and three for the

'junior' brigade.

Regimental flashes, of various shapes and in regimental colours usually recalling historic facings, had already proliferated; now they were officially approved, if produced at regimental, rather than the taxpayer's, expense. The final and most significant concession was the gradual official recognition of divisional insignia.

Thus, by the end of 1940 one of the original principles behind the introduction of BD had been abandoned. Far from an uncluttered and anonymous garment, the blouse was now the backdrop for a mass of insignia. It was now possible to see soldiers sporting, from the shoulder downwards, the following combination: a slip-on shoulder title, or a still-unauthorised coloured, embroidered 'arc' title of regimental design; a divisional or other formation sign; arm-of-service or 'brigade seniority' strips; a regimental flash; badges of rank; and on the forearm, trade, proficiency, and/or good conduct badges. Flashes or badges were also stencilled on steel helmets at unit taste and expense.

The independence and stubbornness of individual units, and the gradual nature of authority's grudging acquiescence in the existing unofficial practices, explain why no simple rule-book exists to aid the researcher of uniform practice in 1940. Individual photographic evidence is the only sure guide.

1937 PATTERN WEB EQUIPMENT

The prevailing conditions that dictated the introduction of Battledress in the late 1930s — principally increased battlefield mobility, personal comfort and, to an extent, ergonomic considerations — also demanded the development of a new system of personal equipment carriers. The 1908 equipment which had served the British Army during the Great War and beyond was deemed unsuitable for modern combat use. It was heavy, much of the

continued on page 18



After the fall of France Gen. Montgomery's 3rd Div. were moved from Sussex to the south-west. Here a carrier from 7th Guards Bde. is accompanied by a divisional 'Don-R'. All wear the anti-gas helmet cover issued to match the anti-gas cape, with its neck and face pieces folded up (see also 'MI' No.10 p.43); the Guardsman at right wears the cape. (IWM)

equipment carried on it hung below the soldier's waist and thus impeded mobility, and above all it could not be easily adapted to suit all arms of service. The new 1937 web equipment addressed all these shortcomings and provided the soldier with a light-weight, flexible load-carrying system which supported all the major components above the waistline.

The equipment was produced in pre-dyed, durable webbing material which was waterproofed but could be scrubbed clean or 'blancoed' a grey-green colour to smarten it up. All buckles and fastenings were brass; in the field soldiers were instructed to let them tarnish, but many individuals had clearly become so inculcated with the need for routine 'bulling-up' of kit that photographs show many troops in the BEF glittering like Christmas trees.

The main principle of design was flexibility in use.

Men now carried different weapons and loads depending upon type of unit and individual function; and the set allowed a variety of separate items to be assembled quickly in different ways, all of these configurations giving a balanced load which could be taken off (more or less) in one piece.

The set was built around a waist belt, and two shoulder braces which crossed at the back and buckled to the rear of the belt, leaving hanging ends in front of and behind each hip. For the infantry Other Ranks the principal items of the set were two 'universal pouches' worn high on each side of the torso, anchored to both belt and braces; and a haversack or 'small pack'. In normal 'Battle Order' the haversack was slung behind the shoulders on L-shaped straps which engaged at the front with the pouches. It was moved to the left hip, without the L-straps and buckled instead to the brace-ends, on those rare occasions when troops in 'Field Service Marching Order' wore on the back the 1908 'large pack'; this, containing the bulk of the soldier's kit, was usually carried on battalion transport. The haversack held immediate

field necessities: mess-kit, iron rations, washing kit, a sweater, perhaps a change of underwear and socks, and the pale brown drab groundsheet/rain cape folded neatly under its flap.

The universal pouches were large, and accommodated a wide range of different munitions. The rifleman's classic load was a cotton bandolier holding 50 rounds of rifle ammunition in clips, and a couple of grenades, in one pouch; and two magazines for the section's Bren gun in the other. (They could also carry Boys anti-tank rifle magazines, 2in. mortar bombs, etc.)

The 1907 pattern bayonet hung on the left side of the belt in a frog. The water-bottle was the nearly useless 1907 pattern, and was intended to be carried inside the haversack; in practice it was nearly always fitted to the brace-ends on the right hip, and since it had no integral mug an enamel mug was also carried, often slung on a haversack fastening strap. In 1940 no entrenching tool was issued, and all digging was done with picks and shovels 'GS' from unit stores.

* * *

In 1939-40 all armies were

still obsessed with the possibility that poison gas would be used in battle, as in 1915-18, and much effort had gone into providing troops with protection against inhalation and skin-blistering. The 'small box respirator' of the Great War was retained almost unchanged: a filter canister attached by a corrugated rubber tube to a face-mask with two glass eye-pieces. The whole assembly hung on the chest in a light khaki canvas satchel, held secure by a length of whipcord passed round the back; the 'case' also contained various ointments and anti-misting treatments, and several cheap celluloid and elastic 'eye-shields' — rudimentary goggles, worn instead of the mask to protect against splashing liquid agents.

There was also a general issue of anti-gas capes. These were flimsy, proofed, coat-shaped garments with a 'hump back' so that they could be worn over the haversack. They were carried rolled, behind the neck, held by long tapes passing round the body. They were rolled in a complex 'concertina' fashion; a length of tape or cord protruded from the top and tied to some handy place like the gasmask case sling. The

thory was that if pulled sharply, this 'quick release' cord caused the cape to unfold down the back, where the soldier could quickly shrug into it and fasten it. (The ease with which this could actually be achieved, and the effective protection offered, were both exaggerated.) Capes were initially issued in plain light khaki drab, later in a green and brown 'cloud' camouflage pattern. If stored for any length of time the proofing became sticky, welding the cape into a single mass, which tore easily if unfolded roughly. It was a miserable piece of kit, though retained throughout the war as a rain-proof even when the danger of gas had passed.

OTHER BASIC CLOTHING

Denim Battledress

'Overalls, Denim' were intended to provide the infantryman with a workaday alternative to serge Battledress. They closely resembled Battledress in design; but had removable plastic (instead of sewn-on brass) buttons, and because they were made from lightweight denim they could easily be laundered. Originally intended to be worn over BD, denims were issued in a larger size than the soldier's serge uniform; many individuals wore them on their own, which resulted in a ludicrously baggy fit. Nevertheless, in hot weather they were infinitely more comfortable than serge, and were frequently worn in combat, often procured in a size that provided a better fit. Although orders dictated that denims were to be washed weekly, photographs and surviving examples indicate that they were frequently stained with motor and gun oil, and seldom allowed the wearer to present a soldierly appearance. The drab khaki colour varied in shade from greyish green to brown.

Greatcoats

During the cold winter of 1939/40 the BEF made good use of their greatcoats. Entrenched in conditions of icy rain and heavy snow,

Lord Gort's 'Tommies' buckled their field service kit over the top of either of two patterns of thick woollen greatcoats. Prior to April 1939 all infantry Other Ranks' greatcoats had been single-breasted, five-button garments which were worn with the collar buttoned up to the neck. After this date the 'standard' World War II pattern began to appear; this was a longer, double-breasted coat which resembled the pattern worn by officers, and was intended to be worn with an open collar. When not required the greatcoat was folded and stored in the 1908 'large pack'.

Leather jerkins

The sleeveless leather 'trench jerkin' was first employed during the Great War; it proved to be very popular, allowing the soldier freedom of movement while keeping him warm. Extensively used by troops of all arms in 1939-45, the brown jerkin was fastened by four large plastic buttons and lined with khaki drab blanket material.

Mark II steel helmet

From 1916 the Mk.I, or 'Brodie' pattern helmet was standard issue in the British Army. Though of basically similar appearance, the Mk.II, which was introduced just prior to the outbreak of war, had a simpler liner and a narrower and less dished 'brim'. A further refinement was the replacement of the

leather chinstrap with a version made of webbing linked to the helmet by cloth-covered steel springs. The springs provided a 'weak link' which prevented the helmet from garroting the wearer if a nearby explosion forced the helmet back or upwards. (Initially there was some use of the 'Helmet Mk.I*', a 1916 skull fitted with the new liner and strap.)

BASIC INFANTRY WEAPONS

The principal infantry weapon in use in 1940 was the .303in. calibre Short Magazine Lee-Enfield (SMLE) Rifle No.1 Mk.III, which had equipped the majority of British and Colonial troops during the Great War. The British Regular soldier had traditionally been trained to fire 15 aimed shots a minute; and with a well-worn bolt and a steady rest this was quite possible. The Mk.III was a sturdy, old-fashioned, expensively made weapon with an accurate performance at all practical battle ranges. By 1940 a new rifle, the No.4 (which featured an easier-to-use aperture back-sight and a shorter, cruciform bayonet) was set to supersede the trusty Mk.III; however, due to the exigencies of war, it did not come into general use until 1942.

The Mk.III rifle had a removable ten-round box magazine. It had a muzzle

velocity of 2440 feet per second, and could be sighted up to 2000 yards. With additional fitments the Mk.III also had the ability to project rifle grenades, or to mount wire-cutters which caught and positioned barbed wire lengths so that when a round was fired the wire was cut. The rifleman normally carried at least 50, and often 100 or even 150 rounds.

The 1907 pattern sword bayonet was a vicious but unwieldy weapon, 18in. in length. (During the Great War infantrymen had found that after successfully closing with an opponent it was necessary to fire a round into the unfortunate enemy's body in order to withdraw the blade.) In practice very little bayonet-fighting was actually done, and a much shorter 'spike' — as issued with the No.4 rifle — was perfectly adequate.

The Bren gun

By the 1930s the British Army sought an alternative section light machine gun (LMG) to replace the outdated Lewis gun. The Czechoslovakian Zb26 was the basic design selected, and a development of this gun entered British service as the .303in. 'Bren gun' in 1938. The Bren could be fired from its own integral bipod, on a tripod for laying fire on fixed lines, or on an anti-aircraft mounting. Each infantry section included one Bren with a two-man crew, led by the section lance-corporal as the 'fire group' to provide the base of fire for the 'rifle group'. Fed by a curved 30-round box magazine, the Bren could be fired either single-shot or in bursts. With a cyclic rate of 500 rpm the Bren was slower than the German infantry's belt-fed MG34, but it had a remarkable ability to provide sustained fire without serious jamming. It was an extremely accurate weapon, and light enough to be fired from the hip, or even standing from the shoulder by a strong, skilled gunner. Although sighted to 2,000 yards the Bren was capable of

October 1940: the Army pattern life-jacket, made of kapok, here being donned by two sappers of 564 AF Co., 5th Corps, about to construct a pontoon bridge. (IWM)



continued on page 22





(Opposite left) A Regular infantry private, 1940, wearing Battle Order. The carefully made hessian helmet cover, with foliage loops, is typical of some units (e.g. 2nd Royal Inniskilling Fusiliers) in 1940; it was made up by unit tailors from sandbags, and usually fixed permanently to the helmet — the hessian was sewn round a wire ring (often an SD cap stiffener) under the helmet brim. Use of such covers was later forbidden; the current nervousness about poison gas was responsible, since such covers could not be removed for decontamination.

The uniform is Battledress, Serge, of pre-war manufacture. The neatly squared-off 1937 webbing equipment is 'blanched' light green. The gasmask case is slung high, in the 'alert' position. An early khaki anti-gas cape is rolled behind the neck and secured by its tapes round the shoulders; its quick-release tape is brought forward and tied to the gasmask case buckle. No insignia of any kind is worn.

(Opposite right) Private, Middlesex Regiment, going out on a pass. He wears the Field Service cap with metal regimental badge,

but no other insignia. His pre-war BD has all fly fastenings and pleated pockets. The gasmask case and Mk.II helmet are slung in the regulation manner — they were to be carried at all times, on and off duty. The helmet is finished with drab khaki-green paint with a 'sanded' surface.

(Above left) The issue khaki wool V-neck sweater, carried in the haversack when in the field, could be worn over the collarless khaki angora shirt — note pale cotton neckband — and under BD. Note also the ankle tabs of the 1937 pattern BD trousers.

(Above right) The rear arrangement of the cord holding the respirator case tight against the body in the 'alert' position.

(Left) The 'groundsheet' — a rubberised canvas cape, with collar and front button fastening — could be worn, lain on, wrapped around kit, or used in pairs to make a very crude bivouac. Normally issued in plain light khaki drab colour, it was carried folded under the haversack flap, thus protecting the contents. This rare camouflaged example is dated 1940. (Reconstructions)

continued from page 18

doing damage over greater distances if conditions suited. (See 'MI' No.20 for an in-depth article on the Bren.)

Upon the outbreak of war in 1939, 400 Brens a week were being produced — but at only one location — the vulnerable Small Arms Factory at Enfield near London. The very real threat that this single plant could be destroyed by enemy air-attack encouraged the War Office to look for a 'fall-back' weapon. The huge losses of Brens at Dunkirk exacerbated the problem and encouraged the crash development of an alternative: the now little-known Besal Mk.2 machine-gun. This was similar in appearance and basic per-

formance to the Bren, but was sighted to only 300 yards. The principal difference was the method of manufacture: abandoning all hopes of imitating the sophistication of the Bren, the Birmingham Small Arms Company turned to pressings, stampings and spot-welding to achieve a far simpler manufacturing process. The Small Arms Factory at Enfield survived the Blitz, and the Besal was never needed; but a few survive as a rare example of the kind of

emergency measures adopted during the crisis of 1940.

The Vickers machine gun

The .303in. Vickers gun was the British Army's standard medium (heavy) machine-gun, and was issued to an entire MG battalion within each division. Tripod-mounted, belt-fed, and water-cooled, this classic Maxim-type weapon first entered service in 1912 and was used in all theatres during the Great War. (See 'MI' No.14 for an article on its

1914-18 service.) By 1940, although looking distinctly antiquated compared to more modern weapons, it was the principal long-range weapon of the infantry. Its performance and reliability were entirely adequate under most conditions. It was capable of sustained fire for considerable periods, though at 200 rounds a minute a Vickers barrel would be stripped of its rifling after barely 10,000 rounds. Prior to this, however, after only 3,000 rounds of sustained fire the water in

Right:

Reconstruction. Vickers MMG crew, 1940. Training to fight in gasmasks was (and remains) an uncomfortable ordeal; the eye-pieces usually fogged up, whatever the claims made for the anti-dimming outment provided, and the tube was all too easy to snag on equipment

Below:

Reconstruction: Bren group of an infantry section of the Royal Sussex Regiment, 44th Div., 1940; note khaki slip-on titles 'R. Sussex' in an arc. The Army's infantry organisation and small unit tactics were entirely constructed around the provision of one of these teams in every section of infantry.





the seven-pint water jacket would start to boil; the gun was equipped with a condenser tube which led to a one-gallon water can, enabling a considerable amount of the evaporated water to re-condense for further use. Although sighted to 3,800 yards, the Vicker frequently scored lethal hits on enemy targets in excess of 4,000 yards when, due to the high angle of elevation needed for such range, the weapon would rain a lethal salvo of plunging bullets upon its target.

The Boys anti-tank rifle

The Boys anti-tank rifle was perhaps the least effective weapon in the 1940 infantryman's armoury. The dramatic increase in German tank production during the 1930s demanded the urgent development of a suitable anti-

tank weapon for infantry units. The power of the specified weapon was limited to that which a single infantryman could cope with, so the weight of the unit and recoil from the cartridge could not be too great. The resulting weapon, the Boys, was basically a large rifle firing a .55in. armour-piercing bullet via a traditional bolt-action mechanism, fed by a five-round detachable box magazine. Like similar weapons developed abroad, this basically Great War approach to anti-tank fighting was practically useless against Panzers, although it was sometimes effective against other targets of opportunity. The bullet would penetrate only 25mm of armour at up to 500 yards, but the 1940 generation of tanks were largely immune, and even successful pen-

etration seldom hit anything vital. Its hammerlike recoil — despite a buffered butt — and large size and weight made it unpopular. The muzzle velocity was 3,250 fps.

The 2in. infantry mortar

Each platoon HQ section carried one 2in. mortar, a light, simple weapon which could be carried by one man. Aimed largely by eye, it could throw a 2lb. bomb — high explosive, smoke, or illuminating — out to nearly 500 yards, at a rate of at least five rounds a minute. It was a versatile and useful weapon for supporting or screening the infantry sections.

Hand grenades

The three main types carried in 1940 were the No.36 high explosive (the 'Mills bomb'), and smoke and signal grenades, the latter with Bakelite casing. Men were trained to

A signals section with a battery of 6in. howitzers in Scottish Command, autumn 1940. This picture is full of period detail; the field telephones are a poignant reminder of the primitive communications suffered by the BEF. At left kneels a despatch rider in rubberised canvas coat and leggings and a soft helmet, apparently wearing a blue and white signals brassard. (IWM)

throw the No.36 up to 35 yards, and its steel fragmentation casing gave it a lethal radius of about 20 yards — though large fragments could travel up to 100 yards with killing effect. It could be fired from a rifle discharger cup out to about 200 yards. It weighed about 1½lb., and had a seven-second fuze at this stage of the war. **[M]**

**BEF SLEEVE
INSIGNIA**

See page 49

Enemies and Allies, 1940



German Infantryman

These photographs illustrate a German infantry Obergefreiter in light assault equipment as worn in the summer campaigns of 1940. His pack, greatcoat and blankets have been left in the plentiful unit transport; he carries only what he needs for immediate action.

Steel helmet

Model 1935 helmet of 1.2mm steel, painted a matt slate grey. On the left side is a white-on-black decal of the national emblem, an eagle (here with folded wings) clutching a swastika. Pre-war a second decal, a red shield bearing the national colours of black/white/red in slanting stripes, had been worn on the right side, but this was ordered painted over, as being too visible for field conditions, in May 1940.

Tunic

The Model 1935 tunic is worn with a buttoned-in cotton collar band, reversible white (for walking out) and drab green (for field duty), with a centimetre's depth showing above the tunic collar proper — our soldier has unbuttoned the neck in the summer heat.

The tunic is 'field grey', with five front buttons, and four pleated, buttoned pockets; all buttons are of silver-grey pebbled metal, over-painted drab green. The collar is faced in dark bluish-green 'badge cloth'; and bears the traditional Lützen of the old Prussian Guard, in light grey, with a central 'light' of branch-of-service colour on each bar

— here, infantry white. The detachable shoulder straps of the same dark green are piped in infantry white; for field security, no regimental numbers are now worn on these. Above the right breast pocket is the national emblem in Army form: a straight-winged eagle and wreathed swastika, in light grey on dark green backing. On the left sleeve only are the double chevrons of this senior corporal's rank.

Trousers & Boots

The straight, full-cut trousers are in 'stone grey' woollen material; this less green shade than feldgrau dated from the Great War, when it was found that field grey trousers faded in use quicker than the tunic, and the darker shade held its colour. They are folded and tucked into tall black leather marching boots, traditional for German infantry for 150 years.

Field equipment

Normally the belt and its load were supported by black leather 'Y-straps' hooked centrally to the belt at the back and to the rear of each set of ammunition pouches at the front; but photographs show that in 1940 they were sometimes not worn in the field, and early tunics had four metal hooks protruding through the cloth at waist level from internal fabric suspenders to help support the weight of belt equipment. The black leather belt has a white metal buckle plate with a device common to the whole Army: the eagle and



swastika in the same form as on the helmet decal, surrounded by a garter bearing 'Gott Mit Uns' — 'God With Us'. Two triple sets of Model 1933 pouches for rifle ammunition each accommodate six five-round clips of 7.92mm cartridges, giving 60 rounds in all. The Model 1884-98 Mauser bayonet is carried on the left hip in a black leather frog and steel scabbard, the latter steadied by being worn under the retaining straps of the black leather carrier for the entrenching tool.

On the right rear of the belt a drab brown Model 1931 'breadbag' accommodates washing kit, weapon cleaning kit, utensils, emergency rations, his field cap, and small personal items. Attached to the Brotbeutel is the 1931 water-bottle, covered with brown felt and with a strapped-on aluminium cup over the top. To the left of this is the green-painted aluminium mess-tin set. Strapped to the belt at centre rear is a rolled Model 1931 Zeltbahn, a triangular piece of camouflage-printed cloth in 'splinter' pattern, which doubles as a rain cape and a tent-section.

Slung round the body is the fluted Model 1930 canister containing a fabric gasmask with two glass eyepieces and a screw-on cylindrical filter cartridge which fits to the 'snout'. Attached to the canister's fabric sling on the chest is the oil-cloth satchel containing a chemically treated anti-gas cape.

The weapon is the 7.92mm Mauser 98k rifle, a bolt-action weapon with a fixed five-round magazine. (Photographs Jean de Lagarde, courtesy Militaria Magazine)

Waffen-SS

The distinctive camouflage-printed helmet cover and combat smock worn by the elite Waffen-SS units since 1937. (Several different patterns of camouflage printing were seen, mixed in use, from an early date: this helmet cover, in so-called 'oakleaf' pattern, is of later date than the sharply spotted so-called 'plane tree' pattern of the smock.) The Waffen-SS were the first troops ever to be issued generally with camouflage clothing, although examples of occasional use date from the Great War.

The patterns were produced by a complex screen printing and machine printing process on a water-repellant cotton duck cloth.

The 1937 Waffen-SS tunic was all field grey, and such tunics are often seen in 1940 photographs, alongside the green-collared Army-style tunics which expansion and standardisation had already made necessary. The 'rune' patch was worn on the right collar by 'LAH' and the 'SS-IT' units; a worn or embroidered death's-head by 'Totenkopf' units. All wore rank insignia on the left patch.

Field equipment was essentially identical to that of the Army, apart from the SS buckle-plate with an eagle with spread, pointed wings and the motto 'Meine Ehre heisst Treue' — 'My Honour is Loyalty'. This soldier has acquired a non-regulation 'broomhandle' Mauser automatic in addition to his rifle. (Photograph courtesy Andrew Steven & Peter Amadio)

SS Units in the 1940 Campaign

At the outbreak of war the Waffen-SS was an insignificant force, far from the major and partly independent arm of the Wehrmacht which it would later become. Hitler's unhappy experience with the Sturmabteilungen, culminating in the quasi-legal massacre of SA leaders on 'the night of the long knives' in 1933, had made him nervous of private armies. At this stage of his career he was not anxious to provoke the General Staff, who were very sensitive to threats to the Wehrmacht's rights as 'sole bearers of arms in the Reich'. He saw the role of the Waffen-SS after the anticipated victory as a totally reliable armed political gendarmerie to control Germany and the occupied territories.

For both practical and prestige reasons Himmler's hand-picked battalions had to be given an opportunity to participate visibly in the Wehrmacht's conquests; and by 1939 they had been given sufficient training to make this feasible — although they were not expected to achieve much, and were kept under the close control of higher Army formations. The expert and energetic training programme instituted by a transferred Army general, Paul Hausser, between 1936 and 1939 had produced, by the outbreak of war, four large regimental combat groups:

'Leibstandarte Adolf Hitler'

The premier SS unit, at this date un-numbered, was commanded by Josef 'Sepp' Dietrich, Hitler's old crony from the street-brawling days. In 1939 'LAH' was a motorised regiment of three infantry battalions with integral heavy weapons, anti-tank, and reconnaissance companies, the latter including an armoured car platoon.

SS-Standarte 1 'Deutschland'

Similar in composition except for having four battalions.

SS-Standarte 2 'Germania'



Similar composition to 'LAH'.

SS-Standarte 3 'Der Führer'

Similar composition to 'LAH'.

In 1938 all these units, or elements of them, had taken part in the bloodless occupations of Austria, the Sudetenland, or both — which had been useful exercises in mobilisation and movement.

Collectively termed 'SS-Verfügungstruppe' in 1939, these units did not represent the limit of Himmler's armed SS troops. He also had at his disposal the manpower of five regiments of 'Death's-Head Guard Units' (Totenkopf-wach-sturm-banne) i.e. internal security troops and concentration camp guards.

During the 1939 Polish campaign 'LAH' fought under 10th Army and 'Germania' under 14th Army; and 'Deutschland' formed part of a mixed formation, 'Panzer-Division Kempf' or 'Panzerverband Ostpreussen'. 'Der Führer' served in the defen-



Left:

Junior officer of 'LAH' leading his men in Holland, 1940.

Centre:

The '2' just visible right of the runes on this SS-Oberscharführer's right collar patch identifies the 'Germania' regiment. SS units were short of light automatic weapons in 1940, and even this senior NCO platoon commander carries a rifle.

Bottom:

Group of 'Germania' infantrymen, 1940; note numbered collar patches — not all were removed for security. Checkered scarves are worn in the throat of the pre-war all-grey tunics.

sive positions of the West Wall on the Upper Rhine. After the cease-fire all returned to Germany for re-organisation.

COMBAT IN THE WEST

'LAH', generously re-equipped, remained an autonomous motorised regiment. The other three regiments

were gathered in October 1939 into a new formation, the 'SS-Verfügungsddivision', with extra artillery and other divisional troops; a fourth battalion of 'Der Führer' became the reconnaissance battalion of the division.

Under command of the concentration camp chief, Theodor Eicke, the first three Death's-Head regiments (which had served as occupation troops in Poland, briefly) were amalgamated with SS-VT cadres, Allgemeine-SS reservists and drafts from other Totenkopf units into a field division, 'Totenkopf-Division'. Himmler was restricted in his recruiting for combat units, as the Army did not want to lose good potential manpower; but he was permitted to enlist 'security' personnel. By transferring Totenkopf units to a combat role, and replacing them by direct recruitment, he had a neat way around this limitation. (Ten new Totenkopf regiments were put in hand in 1939-40.)

The part played by Waffen-SS units in the 1940 campaign was militarily of little signifi-

cance — they fielded some 18,000 men in two divisions and a regimental group, out of a total of 89 Wehrmacht divisions deployed.

'LAH' fought in the Low Countries and France between 10 May and 25 June, at IJssel, Zwolle, Rotterdam, Delft, the Hague, Dunkirk and Boulogne. They were generally effective; but elements were responsible for the massacre of 80 British prisoners at Wormhout on 28 May. The SS-V-Div. fought at s'Hertogenbosch, Breda, Flushing, Poperinghe, Lys, Aire, Hazebrouck, St. Quentin, Soissons, Troyes, Le Creusot, Orleans, Tours, Poitiers, Angoulême and Bordeaux, finishing the campaign close to the Spanish frontier.

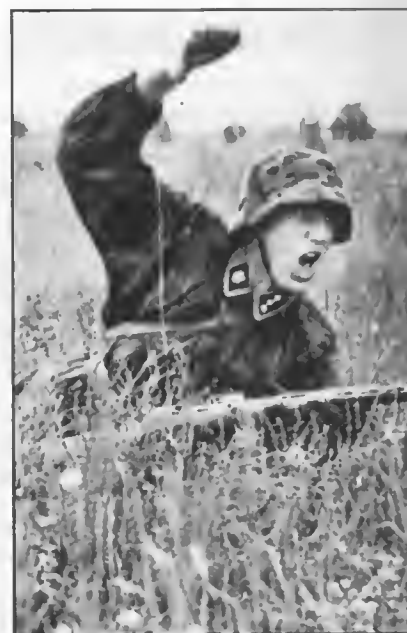
The SS-T-Div. fought at Le Cateau, Cambrai, Arras, Dunkirk, Boulogne, on the Seine and Loire and at Chartre. It was notably less effective than the divisions which had profited from Hausser's training regime. The massacre of some 100 British prisoners, mainly of 2nd Royal Norfolk, at Le Paradis on 27

May was sparked off by the hysterical reaction of SS-Ostuf. Fritz Knochlein to the casualties suffered by his 4th Co., Totenkopf-Standarte 2 during incompetent attacks on the position. (Unlike the officer responsible for the Wormhout massacre, who at the time of writing was still living free and openly, Knochlein was subsequently captured and hanged.)

Although their military exploits in 1940 hardly justified their propaganda image, the Waffen-SS units all gained valuable experience, and two of them the grudging approval of Wehrmacht higher command; the SS-V-Div. would have been included in the invasion force for England if 'Sealion' had gone ahead. All would go on to prove themselves as extraordinary military assets in Russia in the winter of 1941, or subsequently. **[M]**

Blurred but interesting photo of armoured car crews of the divisional reconnaissance battalion of the SS-V-Div. on a foot route march at Heudaye near the Spanish border after the fall of France. They wear Army-style black vehicle uniform, with special

woven SS eagle and crude skull badges on the Schutzmütze. Not belonging to the named, numbered regiments of the division, they do not at this date wear cuff-titles or shoulder strap cyphers. (Courtesy Brian L. Davis)



Above: SS-Ostuf. (Untersturmführer — second lieutenant) of the SS-Totenkopf-Division, wearing all-grey pre-war tunic with officer's silver-piped collar and the skull right patch of Totenkopf units. He carries an obsolescent MP28.



French Infantryman



This private of the 69th Fortress Infantry Regiment must stand as our representative of the tens of thousands of French soldiers who fought bravely to hold the Germans back from the Dunkirk perimeter, enabling the BEF to escape; of the hundreds of thousands who fought on for some two weeks after the bulk of the British forces had withdrawn (along with the 140,000-odd British personnel who remained in France after 3 June, let it be remembered); and of the 110,000 who accompanied the BEF to Britain.

Although up-dated, the uniform and field equipment also show an obvious line of development from 1918. The soldier is terribly hampered and over-loaded compared to his Wehrmacht adversary.

The Model 1926 **helmet** follows the general form of the 1915 'Adrian'; it is painted khaki, and has the applied metal grenade badge of the infantry. The Model 1920/35 double-breasted **greatcoat** has two rows of six khaki-painted buttons, and bears khaki regimental collar patches with dark blue double pipings and cypher. On the left shoulder is the lanyard (*fourragère*) of this regiment's collective citations, here in the yellow and green echoing the ribbon of the *Médaille Militaire*, for a fourth citation. A personal award of the *Croix de Guerre* is pinned to his chest. The greatcoat was worn over a khaki shirt and tie, and perhaps a khaki sweater, but without a tunic; the coat itself was the regulation

field garment, and was most unsuitable for hot weather. The Model 1938 'golf trousers' are worn with puttees and Model 1917 hob-nailed ankle boots.

The Model 1935 leather **field equipment** had reached about a third of the infantry in 1940; its two large and two small pouches held a total of 90 rounds. On his left hip is the Model 1935 **haversack**, holding mess-tins, utensils, daily rations, and four magazines for the section's FAM24/29 light machine gun. On his right is the Model 1935 **water-bottle**, holding about 3½ pints. Behind his waist is slung the satchel for the ANP31 **gasmask**, a box-respirator type similar to the British model.

On his upper back is slung the Model 1935 'sac superieur', half of a two-part **knapsack** system; the 'sac inferieur' holding most of his spare clothing is on the unit transport. The 'upper' knapsack holds emergency rations, cleaning kit, washing kit, sweater, tent section and poles, and in the side pockets grenades or LMG magazines. Two men in each section carried the Model 1916 shovel, with removable head, strapped to the pack; the others, other tools.

The rifle shown is the Model 1916 'Berthier' in 8mm Lebel calibre, still carried by a majority of infantry in 1940. Its needle-bayonet is worn on the left hip, hidden by the coat turnback and haversack. (Photographs François Vauvillier, courtesy Militaria Magazine)

German Tank Crewman

The most dramatically uniformed arm of service in the Wehrmacht of 1940 were probably the crews of the tanks and armoured cars which played a central part in the slashing advances of May-June.

Most armies of the 1930s issued armoured vehicle crews with some kind of protective jackets or overalls to prevent wear, tear and fouling of their service dress uniforms when working in the vehicles. The order of 17 November 1934 establishing the 'special uniform for German armoured troops' — *Sonderbekleidung der Deutschen Panzertruppen* — was unique in that it introduced a separate, second uniform specifically for wear in the vehicle; the Panzer crews also retained their standard field grey service dress for other occasions. The black 'special uniform' was for crews only.

Its design showed several influences. Black was practical in oily, greasy vehicles. The short jacket was tightly tailored, without exterior features to snag on the many protrusions in a tank; and double-breasted, for warmth. The loose trousers gathered at the ankle made for ease of movement, since tank crews need agility. It is said that Gen. Guderian himself had a hand in the design, copying some features of ski clothing.

The odd headgear would not long outlast the 1940 campaign, being replaced by a matching black sidecap. The large, floppy 'beret' was termed a *Schutzmütze*, and was in fact made in two parts, inner and outer. The loose beret fitted over a padded 'crash-cap' of rubber

and oilcloth, itself covered with black woollen fabric; in the photographs its prominent rim can be seen. The uniform is worn here over the regulation grey shirt and black tie, the trousers gathered over the marching boots. The general issue belt is worn, with Army buckle-plate, and a holstered PO8 automatic.

Insignia did not entirely follow Wehrmacht norms. The national emblem, in white-on-black machine embroidery, appears on the right breast and upper part of the cap; below the latter is a flat-embroidered national cockade in a white wreath. The armoured troops' arm-of-service colour (rose pink) appears as piping round the upper collar, however, as well as round the plain shoulder straps of this private. All ranks of the Panzer units wore black collar patches, edged with pink piping, bearing silver death's-heads; these recalled traditional Prussian Guard Hussar insignia, and earlier emblems worn by elite cavalry units right back to the mid-18th century.

The ribbon of the Iron Cross 2nd Class is worn in the buttonhole. On the left breast is pinned the 'Panzer Battle Badge', awarded to personnel of all ranks who had fought as AFV crew in three engagements on three separate days. It is a slight anachronism here, as it was not officially instituted until December 1940; but our *Panzerschütze* appears correctly as a decorated veteran of the *Blitzkrieg*, a few months later. (Photographs Jean de Lagarde, courtesy *Hommes de Guerre Magazine*.)



Invasion Alert: The Home Defences



On 17 June, in response to a request by the Prime Minister, the Chiefs of Staff Committee produced a report outlining Britain's chances of surviving a German invasion. The report's 13th paragraph summed up the Committee's feelings: 'Our conclusion is that, *prima facie*, Germany has most of the cards; but the real test is whether the morale of our fighting personnel and civil population will counter-balance the numerical and material advantages which Germany enjoys. We believe it will.' Sir Hastings Ismay, Churchill's representative on the Chiefs of Staff Committee, recalled that 'the report contented Churchill, and the conclusion undoubtedly represented the views of the nation as a whole.'

Germany's victories on the Continent had made the English Channel a kind of no-man's land between the rival forces, and Britain's front line was its thinly defended southern coastline. The mantle of front-line defence had now been passed from the Army to the RAF, primarily the 600 Hurricanes and Spitfires of Fighter Command's 23 front-line squadrons. If this airborne shield cracked, the meagre coastal and ground defences would be the final obstacle to an irrevocable German victory.

A broadcast by the Secretary of State for War, Anthony Eden, on 14 May not only established the formation of the Local Defence Volunteers; it also emphasised Government fears about the possibility of German infiltration behind the lines by airborne troops (some, it was thought, might arrive cunningly disguised as nuns!) and a secretly activated 'Fifth Column'. These fears were a justifiable reaction to the success of German operations in the Low Countries, where paratroops had been extensively used to seize vital targets in advance of the main thrust.

Above:

The spirit of 1940 — an infantryman demonstrating his determination to take on 'Operation Sealion' single-handed, if necessary. The material resources available to him in the event of an actual invasion are more or less completely pictured here — a rifle, some barbed wire and a few sand-bags. This picture was taken at the request of GOC Southern Command to be used on that year's Christmas card. (Imperial War Museum)

Right:

Studiously posed 'relaxed confidence' displayed by gunners of 'G' Battery (Mercer's Troop), Royal Horse Artillery manning one of the larger pill-boxes constructed along the various 'stop-lines' inland from the expected invasion coast. The official photographer has created a nice mix of culture and cosiness, with his soldiers playing shove-halfpenny, reading, and thoughtfully selecting records for their gramophone. The gunners wear brass 'RHA' shoulder strap titles, white lanyards, and red/blue helmet flashes. (IWM)



Furthermore, the speed with which French resistance collapsed was considered, in part, to be due to the spread of panic and confusion among the civilian population and in the rear areas of the military establishment — surely a result of internal agitation by devious 'Fifth Columnists'? It therefore fell to the freshly assembled units of the LDV to concentrate their activities initially on patrolling the countryside, preparing ambushes and manning roadblocks in anticipation of airborne attack. Not surprisingly, at this time members of the LDV were



Private of Royal Engineers during a field exercise in 1940, a photo typical of hundreds of such scenes taken after the fall of France as the Army tried to improve its fieldcraft for a new kind of warfare. Note the crudely-fashioned sniper's face-mask; the non-regulation seven-on black-on-khaki 'RE' shoulder strap insignia; and the muzzle of a Lewis gun — thousands of these were pressed into service to make up for the losses of Brens in France. (IWM)

also known as 'parashots'.

At first it was impossible to arm the LDV with anything approaching effective weapons, for what little remained in the nation's armoury was needed by the Regular troops

THE ARMY AFTER DUNKIRK

The following summary of the Army's position in the South-East is quoted, by permission of the publishers, from Kenneth Macksey's imaginative and convincing book *Invasion: The German Invasion of England July 1940* (Greenhill Books, London, 1980 & 1990):

Home Forces under the command of General Sir Edmund Ironside, though replete in manpower, was desperately short of equipment. Ironside's first aim, as he saw it in the immediate aftermath of Dunkirk, was 'to prevent the enemy from running riot and tearing the guts out of the country'. His plan, which was designed to fulfill the demands of the Chiefs of Staff, was presented to them on 25 June. It was based on a succession of stop-lines beginning at the coast and covering a so-called GHQ Line of anti-tank obstacles guarding Bristol, the Midlands and London, construction of which had not yet started. Inland, too, lay the armoured and semi-mobile formations upon which everything was staked, to deliver a decisive blow should the enemy obtain a firm purchase ashore. Delay was the best that could be expected at the stop-line, where most of the 786 field guns were deployed, or at the GHQ Line, where the bulk of the 167 anti-tank guns were to be posted. But the mobile forces were enfeebled, consisting as they did in Lincolnshire of the 2nd Armoured Division (which had but 178 light tanks instead of its entitled number of 213 medium and 108 light tanks), and in Surrey of the 1st Armoured Division (newly returned in disarray from France) with only 9 medium tanks. By the end of June, the latter formation would be raised to 81 mediums and nearly 100 lights and, at the same time, would take

under command the 1st Tank Brigade with its 90 heavy Matilda tanks — instead of the 180 its establishment warranted — and, at a fraction of its full strength, would become the most powerful striking force in the British Army.

Defence of the south-east of England was the responsibility of XII Corps (Lieutenant-General A. Thorne) and the key sector in Kent where the Germans planned to land was occupied by the 1st (London) Division (Major-General C. F. Liardet). Thorne considered that the landing was more likely to come between the Graveney Marshes and Dover than to the west of Dover. He therefore laid down the Corps Line running from the Marshes to Dover through Canterbury, a system which, for much of its length, followed a railway track and for only a small proportion of that distance could he said to incorporate natural features which provided a significant obstacle. Liardet's triple intention was to defend the beaches, be prepared to occupy the Corps Line and also to be ready to attack the enemy east or west of the Corps Line. The resources at his disposal he called 'ludicrous'. 1st (London) Division had been designated as 'motorized', a derisory title as it stood at the end of June. Since its mobilization in September 1939, nearly all its vehicles were still those which had been requisitioned from civilian firms. Some of its strange assortment of vans and lorries still bore their original merchants' names, and its troop transports were civilian coaches which, in happier days, had taken holiday makers to the seaside. In May, its motor-cycle reconnaissance unit had been removed and sent to its doom in the last-ditch defence of Calais, the motor-cycles then being given to 1st Armoured Division.

On 5 July, headquarters Royal Artillery of 1st (London) Division, under Brigadier J. Price, controlled 34 pieces of field artillery and 12 assorted guns endowed with a speculative anti-tank capability. . . . They were short of ammunition, had not fired practice shoots for some time,

and had more guns than suitable vehicles to tow them.

As for the infantry, they spent most of their time digging and sand-haggling static defences and spent little enough time exercising or firing their weapons, there being a dire shortage of ammunition for the latter purpose. 198th Brigade held the coast line of the Isle of Thanet; Deal Garrison, consisting mainly of 3,000 Marines, were in the line on either side of that port; Dover Garrison, composed of a miscellany of local units, covered the sector between Dover and Folkestone; Shorncliffe Garrison had the stretch of coast from Sandgate to Dymchurch Redoubt; and 135th Brigade (detached from 45th Division) the line from Dymchurch to Midrips. 1st (London) Brigade provided the mobile reserve in the north, while 2nd (London) Brigade lay to the southward, including the task of counter-attacking the airfields at Lymington and Hawkinge, which Fighter Command intended to evacuate when enemy pressure became heavy. This deployment, concentrated in the north and diluted in the south, left the door wide open to the Germans' intended descent. It would be outflanked immediately if the coastal defences fell.

Interwoven with Liardet's infantry, however, was a fairly formidable array of coastal and anti-aircraft artillery. Two 9.2in. guns in the Citadel at Dover could reach half-way across the Channel. Four old 6in. guns (with a range of only 12,000 yards) and two batteries of modern 6ins. (with a range of 25,000 yards), which had composed the pre-war armament, augmented the defences. To these there were now added, spaced along the coast, a number of Emergency Batteries consisting of 4in. and 6in. guns (manned by sailors and army gunners) which once had been mounted in ships during the First World War. From improvised emplacements and with 100 rounds each (of which they were told no more was available) they were instructed to fire at 'big game', engaging small craft only if they

were in large numbers. For night illumination, search-lights were also deployed. Quite the most versatile and modern artillery weapons in the area were those belonging to Major General F. G. Hyland's 6th Anti-Aircraft Division, which was responsible for the guns defending the approaches to London, as well as key ports and airfields. In the region of Dover and Folkestone, Hyland had placed 18 of the latest 3.7in. guns (which also had a powerful anti-tank capability if the gunners chose to make use of it), plus a few First World War 3in. anti-aircraft guns, some modern 40mm Bofors, four 20mm Hispanos and many machine-guns. Normally these guns fired from prepared emplacements, but all were given a secondary, mobile rôle and were issued with what little anti-tank ammunition was available.

The beach defences, apart from the artillery, amounted to a thin infantry screen, with scarcely any mines and only a few strands of wire to hamper enemy tanks and infantry. Inland, Liardet's mobile companies and platoons were spread widely at nodal points whence they hoped to mount local counter-attacks against such vital places as the Manston, Hawkinge and Lymington airfields. Only one battalion (1st London Rifle Brigade) could be spared to counter-attack both Hawkinge and Lymington.

At the root of the British weakness was a dire shortage of weapons and inadequate factory production to make good the deficiencies. Field-gun production ran at about 50 guns a month, infantry and medium tanks at a mere 100. If, at the end of May, the Chief of Staff had sombrely to admit that 'Should the Germans succeed in establishing a force with its vehicles in this country, our armed forces have not got the offensive power to drive it out,' they were not much better off at the beginning of July. Everything worked on a hand to mouth basis. Improvisation was the watch-word, training was restricted by lack of ammunition, and hope stood supreme.



After the War Secretary's broadcast of 14 May more than 250,000 men came forward for the Local Defence Volunteers within 24 hours. This is a typical scene in the yard of a London police station.

The police forces naturally played a major part in civil defence, particularly in the cities during the Blitz. Note the uniforms of these officers: midnight blue tunic with standing collar, pleated breast pockets, silver buttons, dark blue and white 'on duty' brassard, silver metal personal number and division letter (e.g. '694, V') on collar, 'MP' (Metropolitan Police) on shoulder straps, silver sergeant's chevrons. The police were issued with Mk.II helmets painted royal blue with 'P' stencils. (HWM)

re-grouping and re-equipping in depots throughout the country. Some LDVs, it was true, were armed with pitchforks and pick-helves; most grabbed whatever lethal weapons they could find — old sporting rifles and shotguns were popular. (The much-quoted LDV 'pike' was not issued until much later, and due to its unpopularity was almost immediately withdrawn. Not a pike in the true sense, it was in fact the 17in. Enfield socket bayonet of the 1870s brazed to a

crude iron collar and fixed to a length of piping or timber.) Soon American P17 rifles were made available to the LDV (known after 23 July as the Home Guard), but these were not as popular as the British SMLE Mk.III which many cadres had used during the Great War. The P17's .300 cal. ammunition, differing from the .303 of the SMLE, was a further irritation which prevented standardisation throughout the home defences. From 1941 onwards the new Lee-Enfield No.4

(Above) In common with all other British coastal defences in 1940, Newhaven Fort in Sussex was rapidly reinforced to protect the potential landing areas; Newhaven harbour would have been a tempting prize for the invaders, who needed port facilities to bring in their armour and heavy equipment. In this reconstruction the fort's main armament, a 6in. gun, is manned by Royal Artillery gunners; its 100lb. shell had a range of 12,600 yards.

(Opposite, top left) Until the LDV received real rifles volunteers often drilled with these dummies. This man stands in front of a 'Beaverette', a hastily improvised armoured vehicle intended for airfield perimeter defence against airborne attack, and made by adding boilerplate to a commercial chassis and fitting a 'dustbin' turret for a light machine gun. (Below left) The ultimate in self-reliance: LDVs armed with a bayonet-and-broomstick 'pike', and 'Molotov cocktails'.

(Right) A fully equipped Home Guard volunteer in 'Battle Order'; ill-matching halves of the 'Overalls, Denim' suit give a characteristically motley appearance. He wears the HG leather waist belt, with '37 pattern webbing braces and connectors, and the webbing pouches originally made for BAR magazines. Gaiters, bayonet frog and water-bottle carriage are also leather, and he has the ubiquitous slung respirator. The weapon is the P17. (Reconstructions)





Mixed naval and military garrisons manned artillery and anti-aircraft batteries in the three 1860s sea-forts in the Solent: No Man's Land, Spitbank, and (here) Horse Sand. Armament ranged from 6in. guns, through 3in. A/A guns, to these twin Lewis mounts. The crew here wear shirtsleeve order, respirators, and the flimsy 'anti-gas eyeshield' on their helmets. (IWM)



rifle was issued to Regular troops and the Home Guard at last began to get its hands on the trusty Mk. III.

(Given the circumstances and the national mood, fatal mishaps at night-time checkpoints were far from unknown. On the night of 2 June, for example, no less than four people died in separate incidents after failing to notice, or obey, LDV roadblocks.)

PILL-BOXES AND IMAGINATION

Along with conventional weapons the LDV and Home Guard were armed with all manner of improvised devices intended to stem the tide of *Blitzkrieg* should it arrive on English soil. The lethal 'Fougasse' was one

such weapon: an oil drum buried under sandbags at a roadside checkpoint, it was ignited by the tug of a cord, spewing out a flaming mixture of oil and petrol to engulf, it was hoped, any unsuspecting German patrol. Another famous armament was Churchill's own idea — the 'Sticky Bomb'. This was basically a charge of plastic explosive which if lobbed accurately at an enemy tank would stick to the armour plate and explode with devastating effect. The idea was so successful that a range of pro-

jectors was rushed into production to supplement basic manpower.

As invasion fever gripped the country obstacles boasting descriptive names like 'dragon's teeth' and 'hairpins' erupted all across the landscape. Forests of anti-glider poles were erected in open spaces to prevent the enemy repeating techniques which they had used to such good effect on the Continent. Hundreds of 'pill-boxes' dotted the coastline and stood sentinel in vulnerable areas, or close to bridges and rail-

way junctions. Under the supervision of Maj. Gen. Taylor of the Directorate of Fortifications and Works, several basic types were built. One version, with 15in. thick walls, was designed to house riflemen; another with walls 42in. thick protected a Bren gun and crew, situated to command a wide field of fire. The largest kind was designed to mount either 2pdr. or 6pdr. anti-tank guns, and was constructed from a combination of bricks and concrete to withstand a direct hit from the dreaded German

A PEOPLE'S ARMY: LDV and HOME GUARD

Due to the urgent manner in which the LDV was formed following Eden's broadcast of 14 May, there was no organisational structure ready to administer it. A strictly military organisation did not emerge until 1941. Enrolment usually took place at local police stations, where volunteers between 17 and 65 years old filled in a form — including the question of their access to private firearms. At first they were recorded only under the number of the flimsy khaki cloth brassard, bearing a black stencilled 'L.D.V.', which they were issued. Public-spirited citizens, and notably retired Army officers with Great War service, were relied upon by the War Office to provide leadership.

In 1940 Britain was divided into 12 Civil Defence Regions each under the authority of a Regional Commissioner, who was empowered to make emergency decisions for the protection and administration of his region if invasion occurred. The LDV was added to the commissioners' responsibilities. The Lords Lieutenant of counties were also involved; traditionally presidents of the county Territorial Associations,

they were expected to provide TA facilities and personnel to help train and accommodate the LDV. It was intended to link the LDV to the Regular Army command structure. There were seven Army geographical commands, which were sub-divided into LDV zones, each of which had its own LDV battalions affiliated to county regiments.

LDV battalions each had four companies, each of four platoons, each of three sections. There was no official establishment, and strength could vary from about 640 to as many as 1,600; most were about 1,000 strong. On 23 July 1940, at Churchill's insistence, the LDV became the 'Home Guard'. On 23 August HG units were given county titles; e.g., the former 'Abingdon Platoon LDV' became 'No.3 Platoon, A Company, 1st Berkshire (Abingdon) Battalion, Home Guard.'

From this point on HG units began to receive the cap badges of county regiments and special shoulder flashes to wear on the uniforms which began to become available. When supplies allowed, the volunteer received: one suit of 'Overalls, Denim'; one Field Service cap; one steel helmet; one greatcoat; one pair of boots; one pair of garters (black leather); one set of 1937 pattern web shoulder braces; one pair brace connectors;

one leather belt; one pair large web pouches (peculiar to the Home Guard and originally intended to hold Browning Automatic Rifle magazines); one haversack; one field dressing; one blanket between two men; one groundsheet between four men; and two brassards.

After August 1940 there began to be limited issue of Battledress, Serge — a distinct improvement over denims on cold night patrols. The Home Guard wore shoulder titles in white on khaki, and county or city flashes in black on khaki drill cloth — abbreviations of names (e.g. 'DOR' for Dorset, 'KT' for Kent, 'G' for Glasgow, 'LON' for Greater London, etc.) above a battalion number. From 6 August under A40 Army Instruction 924, the Home Guard's role as part of the Crown Forces was set out: this was basically to warn Regular forces of attack, to delay and to harass the invader. From then on the HG was to have commissioned officers and NCOs along Army lines — which disappointed some early LDVs who had been attracted by its democratic nature.

Even so, it was not until 1941 that Army insignia appeared universally. Initially rank was denoted by dark blue strips on both shoulder straps, or by conventional

chevrons: Zone Commander — one broad strip; Group, Battalion, Company, Platoon Commanders — four, three, two and one narrow strips; Section, Squad Commander — three and two chevrons.

Training did indeed often require the substitution of broomsticks for rifles, although many units used the crude wooden dummy rifle issued to Army cadets for drill instruction. The Swift Target Rifle, which fired a needle-tipped pointer into a card target mounted at the end of the 'barrel', was used in an attempt to give recruits some idea of how to hold and sight a rifle. Similarly, to encourage volunteers to come to terms with the principle of close-quarter fighting, a specially weighted non-firing rifle with a spring-loaded blunt plunger was used to simulate the sensation of plunging a bayonet into the invading Hun...

Until the build-up of stocks allowed the general issue of the SMLE the Home Guard had to make do with whatever the government could procure. The principal weapon employed in 1940 was the American P17; usually a red band was painted round the forestock of this .300 cal. weapon to prevent confusion over ammunition supplies.

88mm gun.

Anti-tank obstacles and pill-boxes were generally situated along the various 'stop lines' and were especially prolific on the main 'GHQ Line' defensive position. However, experience in France had confirmed Napoleon's maxim that 'the side that stays within its fortifications is beaten'; Britain's strategic defences were intended as temporary obstacles to the enemy's advance which it was hoped would give the Chiefs of Staff enough time to employ the crucial strategic reserve in a decisive counter-attack.

Old guns, new gimmicks
Unfortunately for Gen. Ironside, Commander-in-Chief Home Forces until his replacement by Gen. Alan Brooke on 19 July 1940, there was precious little strategic reserve available to employ. Against Hitler's 200 battle-hardened divisions Britain could field barely a tenth of this number, and had barely 500 field guns to cover a potential invasion area that stretched from Devon to the Wash. Most stretches of

beach along the 800 miles of available coastline boasted only one machine-gun per mile. The 'Emergency Coast Batteries', the heavier coastal armament, consisted in the main of guns and mountings from ships which had been scrapped after the Great War. As German railway guns

were moved up to Calais, work proceeded apace to develop the only two counter-bombardment batteries in the target area of Dover. Manned by Royal Marines and known locally as 'Winnie' and 'Pooh', the two venerable 14in. monsters were the only 'heavies' avail-

able until the Fan Bay, South Foreland and Wanstone Batteries were completed between 1941 and 1942. The desperate state of coastal defence is best illustrated by

continued on page 52



October 1940: men of 5th (Doucaster) Bn., Home Guard, in Northern Command, practice the apprehension of an 'enemy parachutist'. Badged to the KOYLI, this unit have a variety of insignia — 'HG' shoulder strap slides and 'Home Guard' brassards — but not yet proper regional and unit flashes. The company commander (centre, with pistol) wears the two narrow blue shoulder stripes of his rank. Weapons are mostly P17 rifles, with one Thompson, and (left) an old Austrian Steyr pistol. (IWM)

Below:

The real thing: a Luftwaffe Oberfeldwebel fighter pilot is captured by a Home Guard in characteristically ill-fitting denims, by a constable who seems to be about to summons him, and by other zealous citizens. It is easy to make fun of this kind of self-conscious group, but it would not have been amusing for either side if the invasion had really put Fallschirmjäger into the Kent skies; there is enough anecdotal evidence to suggest that pitchforks and spades would have been used on enemy stragglers. (IWM)



War in the Skies

While the story of the Battle of Britain has been told repeatedly, there is less published material on the clothing and equipment of the men who fought in the skies over the Low Countries, France, and southern England in May-October 1940. This article offers an introduction to a complex subject, as it applies to aircrew of RAF Fighter Command and the Luftwaffe in the summer months of 1940.



(Opposite left) Sergeant air-gunner, No.264 Squ., wearing GQ Parasuit for Defiant gunners. It incorporated a life-jacket, parachute harness, and internal rear parachute pack (absent here). Type B helmet, Type D oxygen mask, Mk.IV'B goggles, 1936 boots; Other Ranks' Service Dress. (Opposite top right) Hurricane pilot, No.1 Squ.; he wears the officers' Service Dress cap, black lightweight overalls with Pilot Officer's rank slides and squadron breast badge; and carries a seat-type parachute pack. (Opposite bottom right) Parachute pack, worn here over 1930 pattern flying suit. (Right) Aircrew relax outside their dispersal hut. The left hand man wears the 1939 pattern boots; the right hand man, 1930 pattern flying overalls and 1936 boots. (Below) The pilot at left has a Type B helmet, Mk.III goggles, Type D oxygen mask, 1932 life-jacket partly painted high-visibility yellow, and the jacket from the 1938 leather and sheepskin Irvin flying suit over his Service Dress. Centre is another view of the 1930 flying suit, worn with 1933 gauntlets — note zip. The Squadron Leader at right wears only an unpainted 1932 life-jacket, Type B helmet with 'Luxor' goggles, and 1939 boots over his Service Dress. (Couttesy Kent Battle of Britain Museum, Hawkinge)



Military aviation underwent many significant changes during the 1930s. Aircraft flew higher, faster and more reliably than ever before. Fighters, especially, had developed into sleek predators devoid of all the wire bracing, doped linen and drag-inducing multiple surfaces that had previously been the norm. Most fighter aircraft had enclosed cockpits, retractable undercarriages, supercharged engines, and sophisticated weapon aiming

systems for powerful automatic armament.

The Royal Air Force had received far more up-to-date equipment, and had developed (in some cases) rather more forward-looking tactics than the senior services. The electronic early-warning system — RDF (radar) — that ringed the coast in the Chain Home and Chain Home Low system was 'state-of-the-art' and unique to Britain. The target acquisition system and the method of guiding the defending fighters to the intruder were ingenious and complex, but they worked. In 1940 the RAF was equipped with three brand new aircraft types: the Spitfire and Hurricane fighters and the Wellington bomber. The Spitfire and Wellington, especially, were highly advanced machines employing many revolutionary manufacturing techniques.

Right:

Flying Officer Rafael Watson of No.87 Sqn. leaning on his Hurricane, 1940. His plain Service Dress uniform bears only two insignia: the single pale-blue-on-black lace cuff ring of his rank, and his pilot's brevet. Note top tunic button unfastened, the non-regulation but prized mark of the fighter pilot. It is recorded of this pilot that he normally flew wearing an old Service Dress tunic to which a girlfriend had sewn the fleece collar from an Irvin jacket. A pre-war Regular, Watson survived the war — something of an achievement. (RAF Museum)

Below:

An RAF Hurricane pilot photographed in 1940. He wears his Service Dress tunic and trousers, with a Type B helmet, Mk.III goggles, a 1932 pattern life-jacket, and 1936 pattern flying boots. Here he poses wearing the seat-type parachute harness; in fact this would almost invariably be left in the aircraft, where the parachute pack formed a seat cushion, so that all harness and safety straps could be flipped around him and fastened in moments by groundcrew standing on the wing roots. (RAF Museum)



RAF FIGHTER COMMAND Order of Battle, 1 July 1940

Sector	Sqn	Aircraft	Combat Ready	Base Airfield
No. 11 Group: HQ Uxbridge, Middlesex				
Biggin Hill	32 Sqn.	Hurricanes	12	Biggin Hill
	79 Sqn.	Hurricanes	12	Biggin Hill
	245 Sqn.	Hurricanes	15	Hawkinge
	610 Sqn.	Spitfires	14	Gravesend
North Weald	56 Sqn.	Hurricanes	16	North Weald
	85 Sqn.	Hurricanes	15	Martlesham
	151 Sqn.	Hurricanes	14	North Weald
Kenley	61 Sqn.	Spitfires	10	Kenley
	111 Sqn.	Hurricanes	12	Croydon
	501 Sqn.	Hurricanes	10	Croydon
	615 Sqn.	Hurricanes	12	Kenley
Northolt	1 Sqn.	Hurricanes	10	Northolt
	257 Sqn.	Hurricanes	13	Hendon
	609 Sqn.	Spitfires	15	Northolt
Hornchurch	54 Sqn.	Spitfires	12	Rochford
	65 Sqn.	Spitfires	11	Hornchurch
	74 Sqn.	Spitfires	10	Hornchurch
Tangmere	43 Sqn.	Hurricanes	13	Tangmere
	145 Sqn.	Hurricanes	11	Tangmere
	601 Sqn.	Hurricanes	15	Tangmere
Filton	92 Sqn.	Spitfires	11	Pembrey
	213 Sqn.	Hurricanes	14	Exeter
	234 Sqn.	Spitfires	9	St. Eval
Middle Wallop	238 Sqn.	Hurricanes	10	Middle Wallop
Dehden	17 Sqn.	Hurricanes	14	Dehden
No. 12 Group: HQ Watnall, Nottingham				
Duxford	19 Sqn.	Spitfires	8	Fowlmere
	264 Sqn.	Defiants	11	Duxford
Coltishall	66 Sqn.	Spitfires	12	Coltishall
	242 Sqn.	Hurricanes	10	Coltishall
Kirton-in-Lindsey	222 Sqn.	Spitfires	12	Kirton-in-Lindsey
Digby	46 Sqn.	Hurricanes	15	Digby
	611 Sqn.	Spitfires	3	Digby
Wittering	229 Sqn.	Hurricanes	14	Wittering
	266 Sqn.	Spitfires	8	Wittering
No 13 Group: HQ Newcastle, Northumberland				
Church Fenton	73 Sqn.	Hurricanes	8	Church Fenton
	87 Sqn.	Hurricanes	14	Church Fenton
	249 Sqn.	Hurricanes	10	Leconfield
	616 Sqn.	Spitfires	11	Church Fenton
Catterick	41 Sqn.	Spitfires	11	Catterick
Usworth	72 Sqn.	Spitfires	12	Acklington
	152 Sqn.	Spitfires	8	Acklington
	607 Sqn.	Hurricanes	10	Usworth
Turnhouse	141 Sqn.	Defiants	14	Turnhouse
	253 Sqn.	Hurricanes	13	Turnhouse
	602 Sqn.	Spitfires	12	Drem
	603 Sqn.	Spitfires	10	Turnhouse
Dyce	605 Sqn.	Hurricanes	8	Drem
	263 Sqn.	Hurricanes	3	Grangemouth
Wick	3 Sqn.	Hurricanes	12	Wick
	504 Sqn.	Hurricanes	12	Castletown

Note: Eight units equipped with Blenheim II's — only nominally fighters, and never used for daylight interception — omitted here.



Above:

Pilots of No. 111 Sqn. waiting the call to 'scramble'. The standing man has a very grubby suit of overalls, presumably once white; the others wear only 1932 pattern life-jackets over Service Dress. (Imperial War Museum)

Right:

Northolt, just before the outbreak of war: Hurricane pilots of No. 111 Sqn. 'scramble' for a training flight. Note white cotton twill lightweight overalls, with squadron badge on the left breast. (RAF Museum)



However, despite all this progress, the airman himself wore clothing and equipment that had received little attention since the end of the Great War. True, due to the benefits of enclosed cockpits, the thigh-length fur-lined boots and multiple layers of thick, uncomfortable clothing had more or less disappeared; but in 1940 aviators in both the RAF and the Luftwaffe wore a mixture of adequate and inadequate equipment.

RAF UNIFORM

The basis of RAF flying clothing in 1940 was still the everyday RAF blue-grey Service Dress uniform. The open-necked, single-breasted, four-button tunic was of smooth barathea for officers and serge for Other Ranks. It had four patch pockets; the breast pockets were pleated, buttoned, and had three-point flaps for all ranks; the unpleated, straight-flapped skirt pockets had no buttons in the Other Ranks' version. All buttons were brass or gilding metal. Officers' shirts were pale blue, airmen's dull blue-grey; all wore black ties. The tunic was worn with straight blue-grey trousers, with laced black shoes for officers and boots for Other Ranks. Although not particularly suitable for use in a cramped cockpit, it was not superseded by RAF Battledress ('War Service Dress') until

the mid-war years.

Until 1939 both officers and airmen had worn a peaked Service Dress cap, blue-grey with a dark ribbed mohair band, the peak being black leather for airmen and covered with blue-grey cloth for officers. The officers' badge was a gilt eagle below a gold-embroidered King's Crown and above laurel leaves; airmen wore a crowned, wreathed 'RAF' monogram in gilding metal. In 1936 a Field Service cap had been introduced; and in December 1939 all airmen except certain particular trades and grades were ordered to wear the FS cap for all duties. Officers frequently wore it on active service. Airmen wore at left front the badge from their SD caps; officers, a smaller badge consisting of the crown and eagle only, in gilt metal.

It is beyond the scope of this article to give a full listing of insignia, which are widely illustrated in standard works⁽¹⁾. The range of officers' rank insignia basically consisted of different numbers and widths of pale blue lace rings on black lace

⁽¹⁾For all aspects of uniform, insignia and flying equipment see Andrew Cormack, *The Royal Air Force 1939-45*, Osprey Men-At-Arms 225.

backing, worn round both sleeve cuffs. On flying and other clothing which had shoulder straps a matching sequence of short transverse stripes of pale blue on black were worn as slip-on slides.

All Other Ranks wore at the top of each sleeve a dark blue rectangular patch bearing a pale blue eagle, similar in shape to that in the officers' cap badge. Sergeant pilots wore three pale blue-grey chevrons on dark blue backing on each sleeve; flight sergeants three chevrons below a small gilt crown.

Aircrew were distinguished by brevets ('wings') for pilots, and half-brevets for observers and air-gunnery, in embroidered form, on the left breast above the pocket. Men who had joined the Auxiliary Air Force or RAF Volunteer Reserve before the war wore 'A' or 'VR' cyphers, in block form, officers in gilt on the upper tunic lapels and airmen in embroidery below their shoulder eagles.

RAF FLYING CLOTHING

Depending upon the weather and the mission aircrew could choose between a variety of

clothing to wear with or over Service Dress. (In the hot summer of 1940 early morning missions were not infrequently 'scrambled' wearing little more than pyjamas, helmet, 'Mac West' and parachute if the bell rang inconveniently early after a late night.)

Two basic sets of flying overalls were available to pilots during the Battle of Britain: the 1930 and 1940 patterns, both being developments of the Sidcot suit introduced during the Great War. Both were cut to the same pattern, the 1930 in thin pale khaki cotton and the 1940 in a tougher pale drab gaberdine; and both had optional fur or quilted liners and detachable fur collars.

Although both were popular, they were uncomfortably warm for wear when sitting around in deckchairs during the hot summer of 1940 waiting for 'the off'. As an alternative many pilots wore much lighter overalls of white or black cotton twill; these were a popular pre-war style, and squadrons tended to favour one colour or the other. They resembled sim-

continued on page 42



(Above) Luftwaffe service dress cap with white summer cover, and tunic, of a senior NCO — note collar ranking of *Oberfeldwebel*; and Luftwaffe issue *Other Ranks' belt*. (Below) Private purchase flying jacket with officer's shoulder straps and breast eagle; *Flieger-Kopfschutzhülle für Sommer mit FT-Gerät* (note throat microphones); second pattern oxygen mask; goggles (*Flieger-Sommerbrille*); and *Kapokschwimmweste 10-76*. (Right) Major of a single-seat fighter unit wearing the officers' *Fliegermütze* and *Fliegerbluse* with breeches and top-boots. He wears the Iron Cross 1st class, and the combined Pilot/Observer's Badge (with gold wreath) normal for fighter pilots. (Opposite) *Oberfeldwebel* of a bomber crew wearing the summer flying helmet; the tan summer flying suit (*Flieger-Schutzanzug für Sommer/Kombination/Baumuster K So/34*); flying boots (*Pelzstiefel*

Pst 3) with flare cartridges; the *Kapokschwimmweste 10-76*; and the standard aircrew parachute, *Fallschirm 30 I*, in its back-pack configuration; there was also a seat-pack version. Note aircrew watch (*Beobachteruhr*), normally worn over flying clothing; there was a matching wrist-compass. (Opposite top right) close-up of summer helmet, the goggles fitted with one of the alternative tinted lens sets, and the *Sauerstoffmaske*; note parachute quick-release buckle, and ripcord handle on left ribs. Note rank patch system used on overalls — white 'eagles' on drab brown or dark blue, the number matching those on the uniform collar patch; for officers the sleeve patch also bore one straight white bar at the bottom for ranks up to captain, two for major to colonel. (Opposite right bottom) Fitting on the *Fallschirm 30 I* back-pack. (Courtesy Kent Battle of Britain Museum, Hawkinge)







Spitfire pilots of No. 41 Squ. flanking their CO, Squadron Leader Donald Finlay (a well-known pre-war Olympic athlete). Finlay wears what appears to be dark blue lightweight overalls — note rank slides on shoulder straps — and a white polo-neck sweater. Flying Officer John Mackenzie, Flight Lieutenant Norman Ryder, Flying Officer Anthony Lovell and Pilot Officer Roy Ford (left to right) all wear Service Dress over shirts and ties or sweaters, and the 1932 life-jacket — note its cracked and discoloured appearance when painted and then used for a while. Mackenzie shot down four Bf 109s, a Heinkel and 'half' a Dornier during the Battle; Ryder, three Bf 109s and a shared Dornier; and Lovell, three Bf 109s, a Bf 110 and a Ju 88 — he was killed later in the war, after being awarded two DSOs and two DFCs. (Courtesy F. K. Mason)

continued from page 39

ple 'boilersuits' as worn by factory workers, with thigh pockets for maps, gloves, etc., and integral cloth belts. They were sometimes smartened up by the application of embroidered squadron badges on the left breast pocket.

Most typically, the RAF fighter pilot of 1940 went into battle wearing Service Dress over a shirt and tie, often with a silk scarf to prevent chafing as he turned his head constantly in an all-round search of the sky; or perhaps a white polo-necked sweater (the RAF 'Froek, White'). He might have the top tunic button ostentatiously unbuttoned, to signify that he was one of the élite — a fighter pilot. To keep his feet warm at altitude he would wear either the fleece-lined 1936 pattern flying boots of black leather, or the 1939 pattern which featured a vulcanised fabric leg.

His life-jacket would be the 1932 pattern, which required the unfortunate wearer to inflate the bladder orally after ditching. To help rescuers spot him in the waters of the Channel he would probably have had the front panels painted bright yellow — curiously, the RAF issued these thick cotton twill

waistcoats in a drab khaki-green colour.

The helmet worn by fighter pilots in 1940 was the Type B, made from soft brown chrome leather and lined with chamois. It incorporated radio earphones housed in zipped, padded oval pockets. Commonly, the constant-flow Type D oxygen mask was worn. This was made of drab green fabric, lined with chamois, and had a microphone housing either covered with chamois or lacquered black. (There were three different variants of microphone housing in use in 1940.)

The greatest danger which pilots faced was fire, swift and dreadful. With a fuel tank of high octane aviation spirit only feet in front of the cockpit, it is no wonder that the risk of fire was taken seriously. Of all the injuries received by pilots in 1940 burns to the face and hands were by far the most common. It is little wonder that

the Air Ministry regulations urged pilots to wear protective goggles at all times, not just as protection against the slipstream when the canopy was slid back but — together with the oxygen mask — to prevent exposure of the face to flames.

The goggles worn by pilots in 1940 differed largely according to personal taste. Photographic evidence reveals a whole range of privately bought examples, e.g. the popular 'Luxor' type. However, the most common 'official' types were the Mk.III and Mk.IV series. The Mk.III goggles were simple in construction: large celluloid windows were stitched into a padded leather surround with an elasticated, adjustable head strap. The Mk.IV goggles were much more elaborate. A rubber-padded metal plate contained split-angle glass windows, and the metal size adjuster above the bridge of the nose doubled as the attachment for

a flip-up tinted anti-glare shield. The goggles were secured to the Type B helmet by an awkward system of wire loops which fitted over the earphone housings and were secured by press studs which had to be rivetted or sewn to the wearer's helmet in the correct position for a good fit. This cumbrous arrangement was superseded by the Mk.IV B, which had an elasticated strap to link the two wire loops together behind the head to hold this heavy piece of kit in place. The flip-up anti-glare shield proved a most useful aid against the RAF pilot's eternal menace — the dreaded 'Hun in the sun'.

To protect the hands from cold and the risk of cockpit fires the pilot wore **gloves and gauntlets** — silk or chambray inner gloves, and sometimes fingerless woollen mitts, under leather gauntlets; the most common type in 1940 were the 1933 pattern with vertical cuff zips.

LUFTWAFFE UNIFORM

The German aircrew who fought over France and Britain in 1940 had a wider range of specialised flying clothing than their RAF opponents, but except in one respect this was worn over an equally ill-adapted service uniform.

As in the RAF paragraphs above, this article is not the place for a detailed listing of insignia practice, which is widely published elsewhere.

The basic blue-grey service dress, introduced in 1935, consisted of the *Tuchrock* tunic worn with riding breeches and knee boots by officers, and with straight trousers and high-topped 'marching boots' by airmen. A single-breasted, four-pocket, four-button tunic, the *Tuchrock* had an open neck, and all four pockets had three-point flaps and box pleats. The buttons were of pebbled silver finish.

Branch of service was indicated by *Waffenfarbe* — the colour of the tunic collar patches and the underlay or piping of the shoulder straps: in the flying branch, golden yellow. The rhomboid-



Left:

Luftwaffe officer's Schirmmütze and Tuchrock worn here by Oberstleutnant Joachim-Friedrich Huth, a one-legged Great War veteran who commanded the Messerschmitt Bf 110 wing Zerstörergeschwader 26 'Horst Wessel' in the Battle of Britain. The uniform details are described in the text. The much-prized Ritterkreuz — the Knight's Cross of the Iron Cross — is worn on its red, white and black ribbon under the shirt collar, over the black tie. (Gemeinschaft der Jagdflieger EV)

Below:

Captured bomber crew NCOs in England. Note early Fliegerbluse with, for non-officer ranks, no breast eagle and no pockets. The tall Oberrfeldwebel (left) wears the embroidered Beobachterabzeichen — a light grey mantling eagle on a wreath, on blue-grey — worn as a brevet by navigators. Note also the details of his collar rank insignia — four 'eagles' of this rank, on the yellow patch of flying personnel, the collar edged with silver 'Tresse' for an NCO, and with yellow piping for non-officer ranks of the flying branch. All wear the suede and leather flying boots (Pelzstiefel Pst 3); two seem to carry their folded tan-coloured summer flying suits. Note Other Ranks' Fliegermütze. (IWM)



Hauptmann (captain) had a silver oak spray below the 'eagles'; ranks above, an almost complete wreath enclosing them. The upper lapels themselves were piped silver for officers, yellow for airmen; and NCO ranks from Unteroffizier (senior corporal, or junior sergeant) had a broad silver braid — *Tresse* — round the lapel inside the piping.

Shoulder straps were of blue-grey for airmen, piped yellow round the edges, with *Tresse* for NCOs, whose exact rank was indicated by white metal pips. Officers had straps with yellow underlay and a complete facing of silver Russia braid cords, with gilt pips of rank where appropriate. Up to captain the silver cords were straight and parallel; from major up, arranged in an interwoven pattern exposing more of the yellow underlay.

Above the right breast pocket was worn the national eagle and swastika emblem, for the Luftwaffe in a naturalistic flying shape, of silver embroidery on dark blue for officers and off-white on

shaped patches sewn to the upper lapels were edged with silver-coloured cord piping for officers, unedged for Other Ranks. They bore

numbers of stylised 'eagle' shapes to indicate rank, in white metal for Other Ranks and silver embroidery for officers; officer ranks up to



Heinkel pilot and navigator posing for a 'pre-flight briefing' shot in summer 1940, probably in early August: Lt. Albert von Schwerin (left) was awarded the Knight's Cross on 31 July. He probably flew with Kampfgeschwader 55 — the unit records are incomplete; and was killed during the night Blitz over England on 19 November 1940. He wears the Tuchrock with straight uniform trousers, like his navigator, who wears the Fliegerbluse. Both seem to wear the tan-coloured summer helmet, apparently of an early type without the goggle-strap 'step' at the top of the earflap housings.

blue-grey for airmen. Badges equivalent to the RAF brevets were worn on the left breast pocket; pilots wore a bi-metal badge showing a grey flying eagle on a voided silver (or gold) wreath, navigators, air-gunners and wireless operators similar badges with differently shaped eagles and other detail variations, all on silver wreaths.

A popular alternative jacket was the *Fliegerbluse*; this was intended to be a more practical garment for actual flying duty, being less liable to snag on the many protrusions in a cockpit. Like the tunic it was made of blue-grey wool/rayon, but it was shorter, tailored to fit snugly to the hips, and had no external pockets and a fly front.

Officers' blouses had slanted slash side pockets without flaps; airmen's, none. Collar, collar patch and shoulder strap insignia and pipings were as on the tunic. Officers wore the breast eagle, but Other Ranks did not — at this date. Aircrew badges were worn, often in embroidered form sewn to the left breast.

(A later jacket similar to the *Tuchrock* but with five front buttons, and narrower-cut lapels, was the *Waffenrock*, which could be worn either open or buttoned closed at the neck and which was intended to replace both *Tuchrock* and *Fliegerbluse*. It never did.)

For flying duties these jackets were worn with pale blue shirts and black ties. Officers often flew in riding breeches, either with flying boots or — surprisingly — their 'jackboots': several photos of captured aircrew in England confirm this. Equally often they wore instead straight trousers like their airmen's.

There were two types of uniform headdress: the *Schirmmütze* or peaked service dress cap, and the *Fliegermütze* or sidecap. Airmen invariably took the latter into the cockpit with them, if they took any cap; officers oc-

LUFTWAFFE Order of Battle, 13 August 1940¹

Senior command	Geschwader	Aircraft	Gruppe anfields ²
Luftflotte 2: HQ Brussels			
I Fliegerkorps: HQ Beauvais			
	KG 1	He111 (I, II)	Montdidier
		Do17 (III)	Rosieres-en-Santerre
	KG 76	Do17 (I, II)	Beauvais, Cormeilles
		Ju88 (II)	Creil
II Fliegerkorps: HQ Ghent			
	KG 2	Do17	Epmoy, Arras, Cambrai
	KG 3	Do17	Le Culot, Antwerp, St. Trond
	KG 53	He111	Lille-Nord
	II/StG 1	Ju87	in Pas-de-Calais
	IV/LG 1	Ju87	Tramecourt
	Erp Gr 210	Bf110	Calais-Marck
	II/LG 2	Bf110	St. Omer
IX Fliegerdivision: HQ Soesterberg			
	KG 4	He111 (I, II)	Soesterberg, Eindhoven
		Ju88 (III)	Amsterdam
	KGr 100	He111	Vannes
	KG 40	Fw200	Brest
	KGr 126	He111	coastal detachments
Jagdfliegerführer 2: HQ Wissant			
	JG 3	Bf109	Colombert, Samer, Desvres
	JG 26	Bf109	Audemert, Marquise, Caffiers
	JG 51	Bf109	Wissant, Wissant, St. Omer
	JG 52	Bf109	Coquelles, Perplinge
	JG 54	Bf109	Gumes, Hermalinghen, Gumes
	I/LG 2	Bf109	Calais-Marck
	ZG 26	Bf110	Yvrench, Crecy, Barley
	ZG 76	Bf110	Abbeville, Laval
Luftflotte 3: HQ Paris			
IV Fliegerkorps: HQ Dinard			
	LG 1	Ju88	Orleans, Orleans, Chateaudun
	KG 27	He111	Tours, Dinard, Rennes
	KGr 806	Ju88	Nantes
V Fliegerkorps: HQ Villacoublay			
	KG 51	Ju88	Melun, Orly, Etampes
	KG 54	Ju88	Evreux, St. Andre-de-l'Eure
	KG 55	He111	Dreux, Chartres, Villacoublay
VIII Fliegerkorps: HQ Deauville			
	StG 1	Ju87	Angers
	StG 2	Ju87	St. Malo, Lannion
	StG 77	Ju87	Caen
	V/LG 1	Bf110	Caen
Jagdfliegerführer 3: HQ Cherbourg			
	JG 2	Bf109	Beaumont-le Roger, Beaumont-le Roger, Le Havre
	JG 27	Bf109	Plumetot, Crepon, Carquebut
	JG 53	Bf109	Rennes, Dinant, Sempy/Brest
	ZG 2	Bf110	Amiens, Gyanecourt
Luftflotte 5: HQ Stavanger, Norway			
X Fliegerkorps: HQ Stavanger			
	KG 26	He111	Stavanger
	KG 30	Ju88	Aalborg (Denmark)
	I/ZG 76	Bf110	Stavanger
	II/JG 77	Bf109	Stavanger/Trondheim

Notes.

(1) Reconnaissance, mine-laying, etc. units omitted. Abbreviations of unit titles are: JG = Jagdgeschwader, ZG = Zerstörergeschwader, KG = Kampfgeschwader, StG = Stukageschwader. Nominal full strengths were nine aircraft per Staffel; three Staffeln formed a Gruppe; three Gruppen formed a Geschwader.

(2) Where one base is shown all sub-units were co-located; two or three bases indicate dispersal, and are listed in order e.g. I Gruppe, II Gruppe, III Gruppe.



Left:

The Netzkopphaube summer flying helmet, Flieger-Sommerbrille, and oxygen mask. The cylindrical connector for the radio lead hangs at centre rear, partly hidden here by the throat-mike strap.

Below:

Messerschmitt Bf 109E pilot about to take off for a mission over England. He wears the net-topped flying helmet and the small dark brown tinted summer goggles. A mechanic in the standard black overalls checks cowling latches, while the crew chief checks harness straps. (Hans Obrt)



asionally took the former – again, as confirmed by prisoner photographs. The peaked cap was uniform grey-blue with a black ribbed band; officers had silver piping at the crown and on both edges of the band, and silver chin cords; airmen, piping in the yellow *Waffenfarbe* of the flying branch, and a black chin strap. The Luftwaffe eagle was worn on the crown; and on the band a national cockade, wreathed and with stylised flanking wings. These were both in silver embroidery for officers, and white metal for Other Ranks. The *Fliegermütze* was piped silver round the top edge of the curtain or 'turn up' for officers, unpiped for airmen. The eagle was sewn to the front of the crown, and a plain raised cockade in the national black/white/red col-

ours to the curtain; badges varied in materials with rank.

LUFTWAFFE FLYING CLOTHING

Protective flying clothing was as varied as in the RAF. Fighter pilots in summer 1940 normally flew in the *Fliegerbluse* alone, or wore over it one of a number of privately purchased **flying jackets**. Usually these were of soft black (or occasionally dark brown) leather, hip length, with a zipped front and various arrangements of pockets, with zips or press studs. Uniform shoulder straps were usually applied, sometimes the right breast eagle badge, and even pinned decorations such as the Iron Cross 1st Class. Less common at this date, but not unknown, were fabric wind-cheaters with knitted waists

and cuffs, usually in pale colours.

Officially issued flying clothing was almost entirely limited to the crews of multi-seat aircraft – the bombers and twin-engined fighters – whose cockpits were less cramped than that of the tiny Bf 109E.

The most often photographed was the summer one-piece **flying overall** in light tan fabric (*Flieger-Schutzanzug für Sommer (Kombination)*, *Baumuster K So/34*). This 'Sommerkombi' is illustrated in the accompanying colour photographs; its most noticeable feature was a slanting fly opening from left hip to right shoulder, where there was a caped effect. There was also a dark blue-grey fabric winter suit, fleece lined, and with a dark fleece collar, and a matt 'velveteen' finish; this

was designated *Flieger-Schutzanzug, Land, für Winter (Kombination)*, *Baumuster KW 1/33*. A distinction was officially made between over-land and over-sea missions in the issue of a fleece-lined brown leather flying suit for the latter (designation as above but 'See', *Baumuster KW 1/34*); there was also a heated two-piece leather suit.

Three types of **flying helmet** were seen in 1940. The dark brown leather, fleece-lined, winter helmet (*Flieger-Kopfschutzhülle für Winter mit FT-Gerät*) and tan fabric alternative (as above but 'für Sommer'), respectively *Baumuster LKp W 100* and *LKp S 101*, both had earphone housings covered with hard leather with a 'step' to hold the goggle strap. Both had three-point attachments for the oxygen mask, with a hook fitting high on the brow to take a central vertical strap; and – unlike RAF helmets – both had throat microphones mounted in a separate leather-covered strap passing forward on each side from a rear attachment.

The *Netzkopphaube*, *LKp N 101* was a summer helmet particularly favoured by fighter pilots. It had a skull of brown netting for ventilation, and a brown leather browband and sidepieces; there was usually a two-point attachment for the **oxygen mask**.

The mask was of superior design to the British equivalent, being of the 'demand' rather than the 'constant flow' type. There were three variants of the *Sauerstoffmaske*; the earliest is recognisable by the vertical fluted

Two photos, not of the highest quality but of some interest. Three snapshots show an unidentified pilot of the staff of 1 Staffel, ZG 2, probably at Amiens. The aircraft is Messerschmitt Bf 110C-4, Werke Nr.3246, coded '3M+' (given B) B'. Posing on the aircraft the pilot wears a private purchase leather jacket, service dress riding breeches, and flying boots. The other shot shows him apparently wearing his leather jacket over the dark blue-grey lined winter flying suit (Flieger-Schutzanzug, Land, Winter, Baumuster KW 1/33) or 'Winterkombi'. His life-jacket is the large-collared Kapokschwimmweste 10-76B/F 30156; and he seems to wear a yellow high-visibility 'ditching cap' over his flying helmet, with its side-pieces tucked up inside.

Below:

Messerschmitt Bf 109E: pilots of JG 53 'Pik-As' on the Channel front — presumably at Dinant — in autumn 1940. The yellow-nosed 109 bears the 'spade in a diamond' badge of JG 53, obscured here by the head of the Geschwader-Kommodore, Maj. Günther Freiherr von Maltzahn. The Ritterkreuzträger (second left) is Hauptmann 'Pitsch' Bremnitz, Staffelführer of 6/JG 53 since October 1939, a year later he was promoted Gruppenkommandeur of II/JG 53 and awarded the Knight's Cross. A two-victory veteran of the Condor Legion, he was apparently noted for his love of strafing British barrage balloons. He died after a botched leg amputation in the first week of the Russian campaign, June 1941. The two officers wear the Fliegermütze, Fliegerbluse, and SWp 734 life-jacket (Luftschwimmweste 10-30/F 30154).



effect on the hard rubber 'snout' into which the concertina tube fitted, and had a different exhalation valve from the later type, which had a shorter, smooth-finished 'snout'. The third type differed only in having two-point attachments rather than three.

Life-jackets were of two types: inflatable, and kapok-

filled. For reasons of cockpit space all single-seat fighter pilots wore the dull straw yellow inflatable type, *Schwimmweste 10-30/F 30154*; this had a compressed air bottle for inflation, mounted at lower front left, and a 'top-up' mouth tube above it. The crews of multi-seat aircraft normally wore the *Kapokschwimmweste 10-76/F 30156*; there were two variants, 10-76A and B, the latter with a high fold-up collar to keep the head of an exhausted ditched airman out of the water. Although clumsy, the kapok jacket was popular; as it was made of rows of 'sausage'-like flotation cells stitched together vertically, it was still effective even if damaged.

Fleece-lined black suede and leather **flying boots** (*Flieger-Pelzstiefel*) were standard wear for all aircrew — though, as mentioned, some officers occasionally flew in their top-boots, which must have been from vanity rather than any practical consideration, since they were too tight for effective insulation. Flying **gloves** were brown leather, with a wrist strap fastened by three press studs. The most common **goggles** were the *Flieger-Sommerbrille, Baumuster Dr 652*, which had two large oval glasses set in metal rims with a metal brow adjuster, set on rubber pads, with a broad elasticated head strap of drab fabric hooked to the rims; crews were issued replacement glasses in clear and graded tinted finishes. There was also a dark-tinted type, *Flieger-Blendenschutzbrille*, with rims of dark synthetic material holding two small dark brown oval glasses, and an elasticated band; these rather resembled conventional sunglasses.

Aircrew often wore wrist-compasses (fighter pilots frequently buckled them round the life-jacket mouth tube); and bandoliers of signal flares round the top of their boots, for use with the *Leuchtpistole* — unlike their RAF opponents at this date, they were equipped with one-man dinghies and supported by a carefully organised air-sea rescue service.



Civil Defence Services

Air Raid Precaution System

The ARP functioned under the civil government — city, county, or borough — and was closely integrated so that reinforcement could be provided whenever and wherever necessary. The first ARP department of the Home Office was formed in 1935. The service was made up of civilian volunteers, largely unpaid. The ARP had jurisdiction over war damage to civilian property and civilian casualties, right through the sequence from precautions taken to avoid attack to the rescue and evacuation of casualties and their housing and feeding after attack. The ARP was responsible for supervising the air raid shelters constructed by local government, commercial firms and private individuals.

Air Raid Warden Service

Responsible members of the public were chosen to lead and advise their neighbours in a small area where they were known and respected. Outside their immediate sector or place of employment Wardens had no authority, and in their sector they did not have police powers. They were purely co-ordinators between civilians and the police, fire brigades, and other services. Basically an urban service, it was organised into sectors of approximately 500 inhabitants, each with a warden's post, manned during raids by a Senior and two other Wardens.

Auxiliary Fire Service

Formed to supplement the regular fire brigades, from volunteers aged between 25 and 50. Those passing the training course were put on a nominal roll for their locality, and were called out at short notice in emergencies. They provided relief for regular fire brigade personnel, filled out the crews of additional regular fire brigade appliances, crewed patrol units with light trailer pumps, and generally performed the full range of duties alongside the regulars.

A very wide range of duties was also carried out by the **Women's Voluntary Service**, from ARP work under fire to running evacuation centres and canteens. The **FANY** and **Mechanised Transport Corps** provided vehicles and women drivers for civilian and nursing services; and several different voluntary organisations provided nursing services.

Air Raid Warnings

Detection of enemy aircraft was the responsibility of the RAF, using the radar chain and the Observer Corps. When an incoming raid was plotted a first 'yellow' warning was given secretly to the relevant authorities. When the raid was very near to a particular area a 'red' warning was given, and the air-raid sirens were sounded. Since only one or two aircraft could in theory cause the 'red' warning to be kept in force for a long period, work did not stop automatically; traffic continued to run, and most workers stayed at their post,

(Above) Heavy Rescue crew of the ARP bring casualties out of a blitzed house. Largely unpaid volunteers, these men took considerable risks and did heavy physical labour for hours on end, often while bombs were still falling — and, it is worth adding, often after putting in a day's work at their regular jobs.

The Rescue Service was divided into Heavy (HR) and Light (LR) branches, though both branches frequently wore steel helmets with a simple 'R' stencil; their clothing was otherwise civilian, sometimes with a blue boilersuit. Heavy Rescue squads cleared masonry and rubble; they were picked from powerful men who could quickly handle large amounts of debris, with the minimum of specialised equipment, in an effort to find trapped survivors. Light Rescue squads operated in a more delicate manner, checking every cranny of bombed buildings; survivors were often found alive in narrow spaces (under-stair cupboards were a frequent refuge), basements and air-pockets in the rubble. Small-framed men were ideally suited to this job, and often risked their lives tunnelling many feet under tons of unstable masonry, following the faint moans of the trapped and injured (RAF Museum)

although they were allowed to go to the shelters if they wished. Most did not do so until bombs were actually falling in the vicinity. The official 'all clear' siren was often informally anticipated locally by firewatchers and Wardens. Interestingly, the BBC played no part in the system, and programmes continued without reference to warnings or raids. **MI**

Civilian casualties

Between July and the end of December 1940 a total of 23,002 men, women and children in Britain had been killed in air-raids, and 32,138 wounded.

Captions to colour photographs overleaf:

Civil Defence organisations proliferated in Britain during 1940. Air Raid Wardens were a familiar sight in every street; their most basic task was to patrol at night, checking the effectiveness of the blackout precautions which every householder was responsible for maintaining, to prevent any chink of light escaping doors and windows. The Auxiliary Fire Service made a great contribution to the overall strength of the fire brigades during the Blitz; and every street and factory had its volunteer 'firewatchers', scanning the rooftops for incendiary bombs, and responsible for trying to put out small fires before they spread, with sand-buckets and stirrup-pumps.

(A) An ARP Rescue squad volunteer, with a white Mk.II steel helmet stencilled 'R'; and an issue dark blue bodersuit with a red sewn-on 'ARP' breast badge and silver buttons with 'ARP' motif. He carries here a stirrup-pump, the most basic firefighting tool (apart from a sand-scoop . . .). The straight column was placed in a bucket of water, the pump was held steady by a foot on the stirrup, and vigorous pumping up and down on the handle produced spurts of water from the hosepipe.

British women were conscripted, and directed to work in factories, offices, on farms, even in shipyards. This female factory worker, like all workers in key industries which were considered air-raid targets, wears an issue steel helmet (in black Civil Defence finish) and carries a force-issue gasmask in its khaki satchel. She wears a rare surviving example of the 1940s 'siren suit', a warm woollen overall made popular by the Prime Minister.

The ARP first-aid officer wears only a lapel-badge and distinguishing brassard, and carries a shoulder-slung first aid kit. (The suit is a 1930s original.)

(B) Observer Corps volunteer wearing a chest-mounted telephone set, and the black/white brassard with the name of the Corps in red.

(C) Auxiliary Fire Service fireman wearing full kit, standing by a mobile pump-trailer.

(D) Fire Guards officially came into being during the Blitz; like most such services they were identified only by an ARP lapel badge and a brassard. Their helmet was introduced at the end of the year; of simple pressed construction and deeper-domed shape than the armed forces' Mk.II, it was essentially a 'hard hat' rather than a ballistic protection. It was finished in mid-grey, with a laced-in head harness of very simple construction, and was carried in its own slung holder.



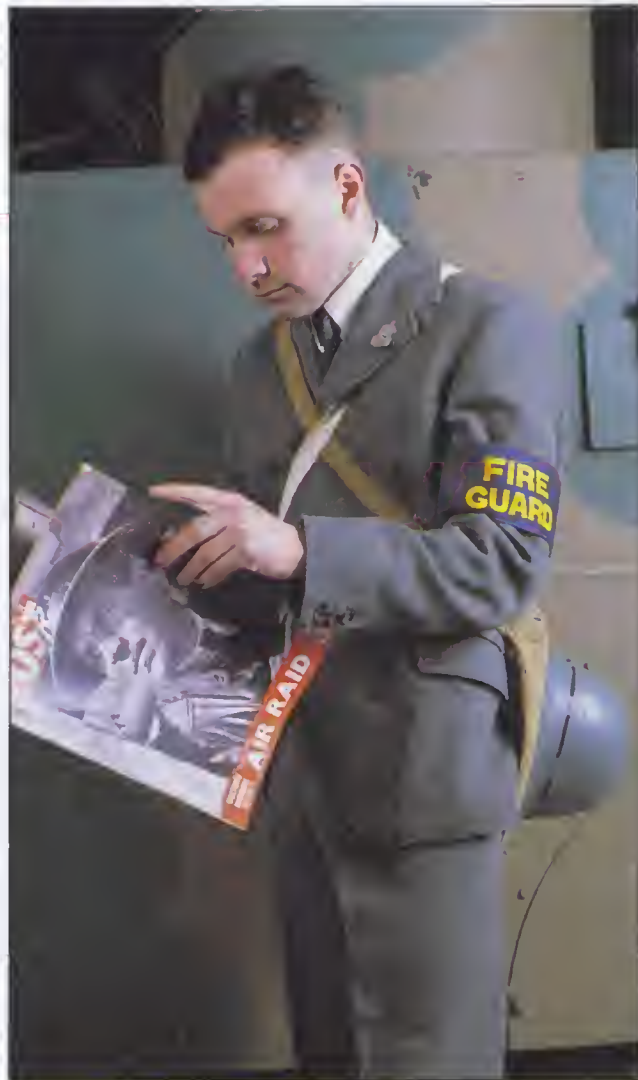
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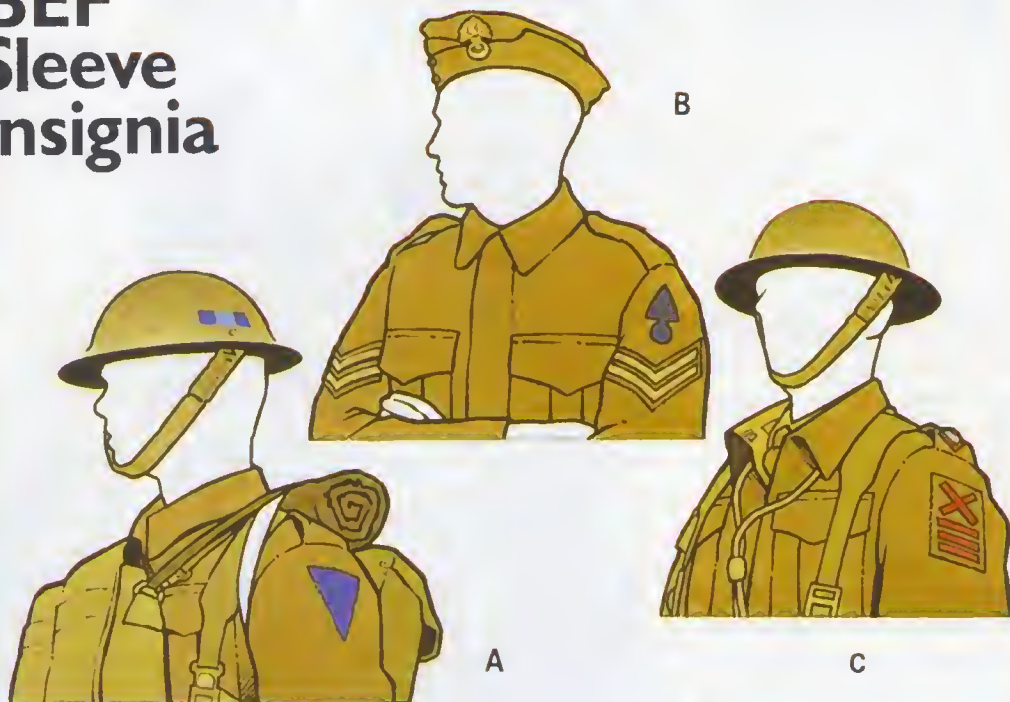


C



D

BEF Sleeve Insignia



In the absence of records, individual photographs are the only evidence for the widespread practice of wearing regimental/battalion patches or flashes. These examples are taken from IWM photographs.

(A) 1st Bn., Royal West Kent Regt., 10 Bde, 4th Div.; IWM F3549 etc.; 'near Roubaix, 3 April'. All ranks wear two sleeve triangles and flash on left side of helmet — triangles vary greatly in neatness. Regimental colours were dark and light blue, so we assume this arrangement by comparison of shades. Note sergeant's Mk.I* helmet.

(B) 2nd Bn., Royal Fusiliers, 12 Bde., 4th Div.; IWM F4170 etc.; 'at Tourcoing, May'. Regimental colours were dark blue and deep red; we speculate dark blue 'grenade' flash from shades in photograph. Note helmet badge.

51st Highland Division

This formation was unique in wearing a divisional scheme of insignia, but colour details are unrecorded. 51st Highland Division at War: ...

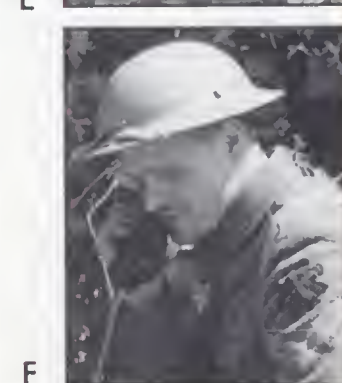
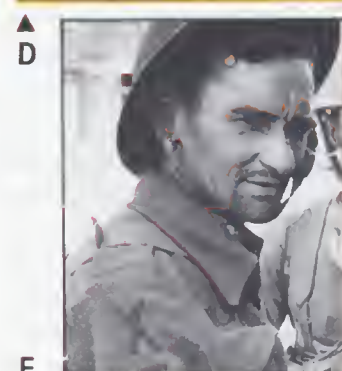
St. Andrew's cross in three different colours was substituted. Each colour indicated a particular brigade and one, two or three bars in the same colour below the cross designated the battalions in the brigade. Photos do not bear this out as a consistent system. It appears to be correct for 152 Bde.; but 154 Bde. certainly, and 153 Bde. possibly, identified at least two of their battalions by single bars set horizontally or vertically.

(C) 4th Bn., Cameron Highlanders, 152 Bde., at Bailleul, IWM F3456 shows this arrangement of three bars for the junior battalion. A photo apparently of men of one of the Seaforth battalions in 152 Bde. shows two horizontal bars. Former officers of both 4th Seaforths and 4th Camerons recall brigade insignia as red.

(D) 8th Bn., Argyll & Sutherland Highlanders, junior battalion, 154 Bde; this surviving BD blouse of Capt. H. D. Malcolm (Scottish United Services Museum, Edinburgh Castle, Acc. No. 1955-723, reproduced by permission of the Trustees of the National Museums of

Scotland) bears dark brown saltire over vertical bar 1in. high x .7in. wide. Photos (e.g. IWM F4736) show 7th A&SH, intermediate battalion of same brigade, with similar horizontal bar(E).

A published photo, inadequately captioned, of 'Gordons' shows similar short, thick horizontal bar under saltire, suggesting that 153 Bde. used same system, but colours unknown. IWM F4616 shows what appears to be Black Watch signaller (F), but not certainly identified, he seems to wear the Thistle-Star patch of 42nd tартan with a lighter coloured saltire superimposed. Finally, a former officer of Div. HQ believes he wore the saltire made up from one purple and one green bar. (With grateful thanks to Gen. Sir Derek Lang, Col. Robert Macrae, Michael Chappell, Stephen Wood and Mr. Ernest Reoch. The Editor would be grateful to hear from any readers who may have first-hand information on this intriguing question.) Paintings by Kevin Lyles.



British Armour in France, 1940

BRYAN PERRETT

Surprising as it might seem, the Royal Armoured Corps was not formed until April 1939, by which time a major war in Europe had become a near certainty. It consisted of 18 Regular cavalry regiments which had been mechanized; eight mechanized Yeomanry regiments; one mechanized Militia cavalry regiment; and all the Regular and Territorial battalions of the Royal Tank Corps, which became the Royal Tank Regiment. Containing as it did such disparate and often antipathetic elements, the new corps was less than popular with its component units, some of whom, indeed, were inclined to disregard its existence as far as possible. Rather more serious than these tribal bickerings was the fact that, at the higher levels, the corps lacked an experienced leadership with real clout in War Office circles; the majority of the original tank pioneers had either left the Army some years previously, or were employed in other branches of the service.

When war broke out the Royal Armoured Corps was required to perform three roles. The first was to provide the infantry divisions of the British Expeditionary Force with divisional cavalry regiments. These, equipped mainly with machine gun-armed Vickers Light Tanks and tracked scout carriers, carried out the same reconnaissance and screening duties previously undertaken by horsed cavalry, with the additional benefit of radio. The second was to form a specialist infantry support formation, the 1st Army Tank Brigade, consisting of the 4th, 7th and 8th Royal Tank Regiments, equipped with the slow, heavily armoured (60mm), two-man infantry Tank A11, a strange-looking machine that some thought a duck, and was named 'Matilda'. Armed only with a single .303in. or

.50in. Vickers machine gun, the A11 was supplemented by the even more heavily armoured (78mm), four-man Infantry Tank A12, also named Matilda by association, as it became available; this much improved design was armed with a 2-pdr. gun and, on the Mark which served in France, with a co-axial Vickers .303in. machine gun. The regiments of the brigade also possessed a handful of Vickers Light Tanks for reconnaissance and liaison duties.

The third major task of the Royal Armoured Corps was the formation of Armoured Divisions for employment in mobile offensive operations. Nominally, each of these divisions consisted of a Heavy Armoured Brigade equipped with Cruiser Tanks A9, A10 and A13, mounting a 2-pdr. gun and up to three .303in. Vickers machine guns as secondary armament; a Light Armoured Brigade equipped with Cruisers and Vickers Light Tanks; a Support Group containing a motorized artillery regiment, a combined anti-tank/anti-aircraft regiment, two motorized infantry battalions, and an engineer com-

pany; and divisional services.

However, despite plans to send divisional cavalry regiments, 1st Army Tank Brigade and 1st Armoured Division to France with the BEF, years of neglect had bitten so deeply that the government's hasty re-armament programme could not hope to make good the shortfall in the equipment required. The divisional cavalry regiments (4th/7th Dragoon Guards, 5th Dragoon Guards, 13th/18th Hussars, 15th/19th Hussars, 1st Lothian & Border Horse, and the East Riding Yeomanry) fared best, and reached France with their respective infantry divisions in September 1939. Their establishment consisted of 28 light tanks and 44 open scout carriers each, but even here a shortage existed and had to be made good by absorbing a consignment of light tanks which Vickers had been building for the Dutch Army — known as Dutchmen, they were similar to the Vickers Light Tank Mark IV, but could be distinguished by their hexagonal turret. One armoured car regiment, the 12th Lancers in Morrisies, was also present; as was a mysterious intelligence-gathering

unit with six Guy armoured cars and a motor-cycle troop, known temporarily as the Hopkinson Mission although later in the war it was to evolve into the legendary Phantom GHQ Liaison Regiment.

ARMOUR IN ACTION

During the period of the Phoney War there was little or no opportunity for action. In April 1940 the Lothians & Border Horse became GHQ troops, and the remaining divisional cavalry regiments were formed into two armoured reconnaissance brigades of three regiments each. On 10 May the **divisional cavalry regiments** screened the forward movement of the BEF into defensive positions along the River Dyle. When, following the collapse of the French armies on the Meuse, the BEF was forced to withdraw on Dunkirk, its light tanks strove bravely to impose the maximum delay possible on the enemy's leading units; but however willing the spirit, there was a limit to what could be achieved with thin-skinned, under-gunned vehicles that were barely a match for the larger German



German troops examine an Infantry Tank A12 — Matilda II — of 7 RTR abandoned during the retreat to Dunkirk; the 7th's tank names all began with G, and this tank is christened 'Good Luck'. . . Encounters with the Matilda II led the Wehrmacht into a hasty programme of up-armouring and up-arming their Panzers. (The Tank Museum)

armoured cars. Those tanks which survived the withdrawal were wrecked by their crews before the latter were evacuated.

The story of **1st Army Tank Brigade** was rather different. In September 1939 there were only sufficient A11s to send 4 RTR to France. Brigade HQ and 7 RTR, with 27 A11s and 23 A12s, arrived early in May; but 8 RTR did not leave England. By 21 May the enemy's Panzer divisions had carved their corridor to the sea and it was decided to strike into the flank of this near Arras, using 1st Army Tank Brigade and part of the 50th Division with the remnants of the French *3^e Division Légère Mécanique* covering the right flank.

The brigade had been har-boured close to the battlefield of Waterloo and, having undertaken a 130-mile road march south throughout the morning and the previous night, was sent straight into action. To achieve a balance between his two regiments Brig. Douglas Pratt had ordered 7 RTR to send six A12s to 4 RTR but, beyond this, there was no time to prepare for the coming battle. Few radios remained on net, there were fewer maps available, there was no possibility of liaising with the infantry, and orders were brief and sketchy. Yet the results of the counter-attack were truly astonishing.

Advancing on two axes, the brigade was performing the role of an armoured division at a slow-motion 8 mph, and crashed through the flank of Maj.Gen. Erwin Rommel's 7th Panzer Division. Rommel had already sent off his own 25th Panzer Regiment to the west, so that the attack fell squarely on his two motor rifle regiments. The Germans' 37mm anti-tank guns were unable to make any impression on the Matildas' armour, and a panic ensued in which part of the neighbouring SS-Totenkopf-Division was also swept away. Although his ADC was shot dead beside him Rommel kept his head, and turned the full weight of his

divisional artillery against the tanks, including his formidable 88mm anti-aircraft guns. This finally halted the advance; but 25th Panzer Regiment, returning in haste to the battlefield, ran into the 3^d DLM and a British anti-tank gun screen, suffering severely in the process.

By dusk the battle was over. The Allies had no further resources to commit and withdrew to their start-line. From the beginning of the campaign Rommel's superiors had been worried by the prospect of a counter-stroke into the flank of the Panzer corridor, and his wildly inaccurate report that he had been attacked by 'hundreds' of tanks created such alarm that they halted their entire armoured drive for 24 hours — a delay which contributed materially to the success of the Dunkirk evacuation. 1st Army Tank Brigade fought several more actions during its own retreat, hard usage and battle casualties reducing its strength to just two tanks by the time it entered the Dunkirk perimeter on 28 May.

1st ARMoured DIVISION

The division, commanded by Maj.Gen. Roger Evans, was still in England when the German offensive began. Even eight months after the war had started it was desperately short of equipment of every kind, including radios and telescopic gun sights; it is a measure of the division's preparedness for war that one of its command vehicles was fitted with a painted plywood

superstructure. There was insufficient time to equip both armoured brigades with Cruisers, so that when the division was ordered to France no less than 134 of its 284 tanks were Vickers Lights. Furthermore, so hastily scrambled together were the Cruisers that their new crews were unfamiliar with them, as well as lacking spares and tools.

As if this was not bad enough, a War Office mandarin had decided that the provision of Cruisers armed with a 2-pdr. gun (which did not fire a high explosive round at this period) made artillery support unnecessary, and the motorized artillery regiment had been removed. The dismal story had not yet run its course. The two divisional motorized infantry battalions had also been removed for an abortive expedition to Trondheim in Norway and were not returned to divisional control. Instead, with 3 RTR, one of the division's armoured regiments, they were sent to hold the port of Calais on 23 May; suffice it to say that the Riflemen's epic defence earned the sincere admiration of their enemies and was another important factor in the success of the Dunkirk evacuation.

The division entered France through Cherbourg and began concentrating at Paey, west of Paris, on 23 May. Apart from its two armoured brigades (the 2nd — Queen's Bays, 9th Lancers and 10th Hussars; and 3rd — 2 and 5 RTR) its assets consisted only of the anti-air-

craft/anti-tank regiment armed with Lewis guns and a few 2-pdr. anti-tank guns; and its supply services were incomplete. Yet, as Evans was to reflect ruefully, 'with this travesty of an armoured division' he was expected to force a crossing of the Somme and advance some 60 miles beyond, fighting his way through several fully equipped Panzer divisions, to the relief of the encircled BEF. Needless to say, the enterprise was doomed from the start; and although several attacks were made on possible crossing sites these were held in strength and each was beaten off.

The second and final phase of the German offensive began on 5 June. The French fought hard but the Luftwaffe had complete control of the skies and, once again, their armies were forced to retreat. As the main battle moved steadily south 1st Armoured Division was forced to retire on embarkation ports, fighting a series of skilful rear-guard actions against 7th Panzer Division along the way. These enabled its personnel and some of its tanks to be evacuated through Brest, St. Nazaire and Cherbourg between 16 and 18 June, when the French requested an armistice. Despite the crippling disadvantages with which it had gone to war, 1st Armoured Division had been in action continuously for four weeks and was still a fighting formation at the end.

If the story of British armour during the 1940 campaign is a sad one, the fault lies squarely on the pre-war generation of politicians who were responsible for creating the conditions in which a major defeat was inevitable; the troops certainly had nothing with which to reproach themselves. **M**



Crew of a Cruiser Tank A13 of 2nd Armd.Bde., 1st Armd.Div. struggle with track repairs in a Normandy town square. The division was packed off to France so hastily that even tools and spares were seriously short in some units. (The Tank Museum)

Invasion Alert: The Home Defences

continued from page 35

As the air-raids grew in intensity the Army and Home Guard had increasing opportunities to practice street fighting in bomb-damaged areas. These two riflemen taking up firing positions in a London street have moved their 18in. long bayonets from belt to haversack for convenience of movement. (IWM)

Below:

Predictably well turned-out men of the Home Guard's War Office unit, 'A' Coy., 58th London Bn.: note white-on-khaki title at top of sleeve, above black-on-khaki drill flashes. The Thompson was the only sub-machine gun available in any numbers until the later arrival of the mass-produced Sten, and was much sought after. (IWM)

the dramatic experiments which took place in 1940 to test a 'flame-barrage' — literally an attempt to set the Channel itself alight!

With so much at stake, unorthodox methods of defence could not be discounted. Churchill, desperate to show Hitler that Britain was still in the war, was busy developing his ideas for a raiding force that could strike at the enemy's bases on the Continent. Originally known as the 'Leopards', the force soon became known as the Commandos. Equally inventive but a great deal more secret was the creation of a guerrilla force of volunteers to 'stay behind' if German troops did in fact capture British territory.

'STAY-BEHIND' UNITS

In great secrecy Intelligence recruiters used the Home Guard as a cover to approach suitable gamekeepers, woodsmen, miners, and especially poachers — men who had an understanding of fieldcraft and the courage to lie in wait, concealed in hides. The enrolled 'Auxiliary Unit' personnel were trained in evasion, survival and sabotage; a handbook labelled *The Countryman's Diary 1939* contained a catalogue of advice on killing, maiming or destroying whoever and whatever confronted the reader. Many ingenious hides, mostly underground, were constructed in the country-



side, especially in the grounds of country houses likely to tempt German generals and staffs. The network was extended until some 20 Auxiliary Unit centres were established. Great care was taken to maintain secrecy: digging was done under cover of faked air-raids, and soil was carefully dispersed.

Auxiliaries were equipped with a variety of lethal weapons, including scarce 'Tommy guns', and large amounts of explosives. The hides contained only ten days' supply of rations, and volunteers were expected to live off the land until the last moment. If the invasion had

made progress the Auxiliaries were tasked with attacking enemy troop concentrations, command centres and vital traffic, neither giving nor expecting quarter. They were organised under cover of three special 'Home Guard Battalions': No.203 in the South, No.202 in the North, and No.201 in Scotland. Names were never officially recorded, and most of the development and implementation of their plans is still classified. It seems unlikely that many would have survived for many weeks; but as the first 'pre-organised' resistance movement in Europe they might have achieved

results out of proportion to their numbers.

The men who spent the invasion summer in damp hideouts were probably mostly middle-aged in 1940, and few, if any, can still be alive; their secrets died with them. (Nevertheless, there was a London newsvendor alive in the 1960s who used to wear the intriguingly anonymous numbered shield badge of one of these 'battalions' in his beret every day.)

* * *

The summer of 1940 witnessed the transformation of the south coast of England. Already largely deserted due to the evacuation of civilians from a narrow coastal strip extending from Sheringham in Norfolk to Portland in Dorset, the coastline was sheathed in a protective armour of beach obstacles, pill-boxes, disguised strong-points and the occasional coastal battery. Troops patrolled the promenades and unfurled mile after mile of barbed-wire coils. Training aircraft were made ready to drop gas on the beaches if the situation became desperate. Even beach-huts were pressed into service when, filled with pebbles and shingle, they were laid, end on end, to form rather unlikely tank-traps. In truth the coastal defences represented little more than a thin crust. Even before the Battle of Britain proper took place in the skies above southern England, Gen. Brooke was re-organising the static defences that had only just been completed in favour of a more flexible and mobile response to a German landing. Construction of pill-boxes was wound down when it was discovered, rather belatedly, that they offered little defence against high-velocity weapons. The numerous road-blocks were found to offer as much of an obstacle to the defender, should they need to move reinforcements quickly into a battle area, as they might to the German Army.

In short, due both to the lack of equipment available to equip the ground defences

and the fact that there had been little contingency planning for combat with German forces on the British mainland, the nation's chances of surviving if the enemy secured a bridgehead were slim indeed. Britain's security depended on its air force. Fortunately, the RAF was equal to the task, and the invasion counter-measures were never put to the test.

[M]



Below:

In 1940 RDI — radar — was still top secret, and most people imagined that detection of raids was entirely the province of the Observer Corps. In fact these volunteers in their isolated and exposed listening-posts provided 'plots' of enemy raids once they had passed inside the radar chain, tracking the number and direction of the raid to

its ultimate target. Here HM King George VI is shown a typical post, with the ingenious Micklethwait plotting instrument — its wheels supplied by Meccano from their toy construction sets! Civilian clothing is worn apart from a badgered dark blue beret and a black and white brassard with red Corps title. (IWM)



Above

Experience in France had not added to the reputation of the .55in. Boys anti-tank rifle, but it continued to be used for another two years; and in 1940 the Home Guard were happy to get any weapon they could. In this reconstruction two HG volunteers (note shoulder strap slides on denim blouses) prepare to take a rare practice shot, loading the five-round box magazine above the breech. Despite the buffeted, sprung butt and muzzle-brake the elderly veteran's shoulder is in for a wholly new experience when the Boys goes off. The result for all the pain was hardly impressive; the round could barely penetrate more than 25mm of armour at 300 yards, and enormous luck was needed to hit anything vital.

Above left

Another indomitable pair of Home Guardsmen; note red hand just visible on forestock of P17; Thompson with drum magazine; and the rare Home Guard khaki serge cape, an item exclusive to them, presumably designed to by-pass a shortage of manufacturing capacity for greatcoats in the early months. (Reconstruction)



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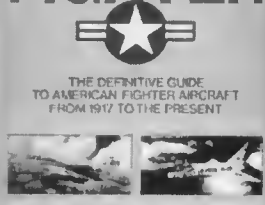
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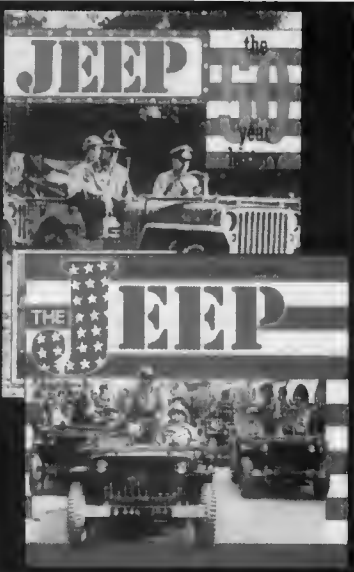
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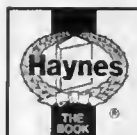
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Bernard Montgomery and Erwin Rommel, 1940

MARTIN WINDROW and BRUCE QUARRIE
Paintings by PETER DENNIS

BERNARD MONTGOMERY

Bernard Law Montgomery was born on 17 November 1887, fourth child of a clergyman. At St. Paul's School he was nicknamed 'Monkey', and the school magazine noted: '... to hunt this animal is a dangerous undertaking. It runs strongly and hard, straight at you, and never falters...' He did not excel at Sandhurst, passing out 36th — too low for the Indian Army commission for which he had hoped. He was commissioned into the Royal Warwickshire Regiment, joining the 1st Battalion on the North-West Frontier in 1908.

The Great War

His battlefield experience was brief, but distinguished. At Le Cateau on 25 August 1914 he went out to bring in a wounded company commander. In October, at First Ypres, Lt. Montgomery led a bayonet charge which captured the village of Meteren. Shortly afterwards he was wounded so dangerously that his grave was dug. But he survived, as a captain, DSO — a high decoration for such a junior officer. For the rest of the war he held brigade and divisional staff appointments, ending the war as a 30-year-old lieutenant-colonel. Ever afterwards he was contemptuous of the waste of troops' lives by the badly-prepared plans of absentee senior officers. He was a fanatic for the meticulous professional preparation of every aspect of an operation; for hard and relevant training; for visible leadership; and for constant

care of the troops' well-being and morale.

During the 1920s and 1930s he alternated between staff and command appointments, in England, Ireland, India, Palestine and Egypt. Dedicated to the mastery of his profession with a monkish single-mindedness, he honed himself — and his subordinates — relentlessly. He was a Cromwellian figure, a devout Christian who dreamed of a New Model Army. He was an influential and popular instructor both at the Staff College at Camberley and later at its Indian Army equivalent at Quetta. Though he neither drank nor smoked, and had the manner of a 'keen scoutmaster' — which could grate on more relaxed personalities — he was a gifted teacher (and a kind one, to young officers who showed commitment). He was always brilliantly prepared, incisive, and radical. He had a gift for simplifying complex questions, cutting decisively through to the essentials. He was no respecter of persons, and became known as a highly intelligent but 'Bolshie' military thinker.

A happy marriage in 1927 helped to humanise him; and its sudden ending with his wife's tragic death after only ten years was a traumatic blow. In the same year he was promoted brigadier, taking over 9th Infantry Brigade at Portsmouth; his energy brought him to the attention of GOC Southern Command, Gen. Archibald Wavell. Promoted major-general in 1938, he was given command of 3rd Division, arriving only a

week before the outbreak of war.

France 1940

Thoroughly aware of the many inadequacies of the BEF to fight a major Continental enemy, he threw himself into readying his division's defences east of Lille with characteristic dedication. His exemplary leadership of his division earned the respect of his corps commander, the great Alan Brooke. He was constantly out among his units, training, encouraging, ordering improvements; he knew his men, and his ground, intimately. (It is a sad comment on the Army of that time that he nearly lost his command when a dryly realistic letter on the subject of VD fell into prim hands at GHQ...) When the German offensive of 10 May led to the advance 60 miles into Belgium, the 'Iron Division' carried the movement out faultlessly and swiftly. As disaster unfolded to the south Montgomery was a model of imperturbable confidence, though he and Brooke were

perfectly aware of the danger. On 14-16 May he held Louvain against enemy attacks. Eventually forced to pull back west and north by the slashing German advance to the south of the BEF, 3rd Division made an orderly fighting retreat. Montgomery had cattle driven along to provide rations; and solved an ammunition shortage by 'liberating' a train.

When Belgium's surrender on 27/28 May left a yawning gap in the line to the north of 2 Corps, it was Montgomery who was entrusted with a hideously difficult and dangerous night flank march. He took his division from Roubaix 25 miles north to the Yser Canal — close across the rear of the threatened 5th Division, in darkness, on minor roads, in the midst of a collapsing front — and had them entrenched by dawn in the path of Von Bock's attacks. Brooke wrote: 'I found he had, as usual, accomplished almost the impossible'. 3rd Division held their positions skillfully until ordered to fall back on Dunkirk.

When Brooke was ordered to England on the 30th it was to Montgomery, his junior major-general, that he entrusted 2 Corps. He successfully evacuated his command on 31 May/1 June. There was only enough equipment in England to re-equip a single division; and it was the 3rd which was selected — to be sent back to France... Luckily for his country, Montgomery's willingly accepted orders to return to the inferno were cancelled by the French capitulation a fortnight later. Instead he was given 30 miles of threatened coast around Brighton to defend; and promptly bearded the Prime Minister, during an inspection, to get his orders and his transport state changed in accordance with his superior understanding of the situation... Churchill agreed; he also remembered.



Major Montgomery at a 47th Division march-past in October 1918. (IWM)

ERWIN ROMMEL

Erwin Johannes Eugen Rommel was born into a family of school teachers at Heidenheim, near Ulm in Württemberg, on 15 November 1891. In July 1910 he joined a Württemberg infantry regiment as an officer cadet, and in 1912 was commissioned lieutenant after attending the Danzig War Academy.

During the Great War he fought in the Argonne, in Rumania, and finally in Italy. During the Austro-German offensive at Caporetto in October 1917 he distinguished himself as a company commander in the *Alpenkorps*; in a continuous three-day struggle including a hazardous night attack his troops seized the commanding heights of Monte Matajur. Rommel was awarded the coveted *Pour le Mérite* (though only after he had argued his entitlement to it, given the awards made to other officers involved). On active service he compensated for a lack of academic brilliance by sheer drive and resourcefulness. He had been a keen mountaineer, fencer and all-round athlete since childhood; and proved himself an unorthodox but popular leader, who preferred to be right at the front with his men (whose company he professed to prefer to that of his peers). He married in November 1916 after a five-year courtship which had begun when he was still in cadet school.

After the Armistice Rommel's career entered the doldrums for a time. Despite his combat record his rather insubordinate attitude and his Swabian accent did not endear him to the charmed circle of Prussian *Junkers* who commanded the Reichswehr, and he was denied entry to the War Academy at Dresden. However, a book arguing his professional principles (*Infanterie Greift An* — 'Infantry in the Attack') became a best-seller, partly thanks to the efforts of a journalist named Josef Goebbels. Rommel rose slowly to the command of his regiment, and after Hitler's accession to power in 1933 he was finally

appointed to the Dresden Academy — as an instructor. He went on to instruct at the Infantry School at Potsdam, which he later recalled as the happiest period of his life.

Panzer command

The similarities with Montgomery's career should not be overstressed, but are unmistakable. An unorthodox, ambitious officer with a good combat record, Rommel was too outspoken in rapid advancement in a peace-time army hierarchy, but was noticed and helped by other ambitious men. (Montgomery, too, had written a radical new infantry training manual.) Rommel had been introduced to Hitler by Goebbels; and though there is no evidence at all that he supported the Nazi creed, Col. Rommel was given command in 1938 of Hitler's personal Army escort unit, the *Führer Begleit Bataillon*. This obviously put him in a favourable career position at the outbreak of war. When asked what posting he wanted, he requested command of one of the new Panzer divisions. He was given the 7th. Formed from the 2nd Light Division, 7th Panzer had fought in Poland, so in May 1940 it was a battle-experienced formation.

Although Rommel's entire training and experience had been with the infantry, his personality made him an ideal armoured commander. He was first and foremost an opportunist — not a derogatory term for a general — and his active career typified Napoleon's maxim: '*L'audace — toujours l'audace*'. Approaching his 50th birthday, with new major-general's oak-leaves on his collar and a fast mobile command, he hurled himself into the French campaign with a gambler's courage.

On 15 May he smashed through the French 1^{re} Division *Cuirassée Rapide* which he caught refuelling and immobilised near Flavion, leaving it in a state of demoralised confusion for 5th Panzer Division to 'mop up'. Pushing rapidly on through the

Maginot Line extension at Clairfayts, 7th Panzer — nicknamed the 'Ghost Division' for its tank regiment's ability to appear unexpectedly behind enemy lines, leaving their supporting units far behind — reached Arras on 20 May. Here Rommel was ordered to swing north towards Lille; and here his gambler's luck very nearly deserted him.

Arras

Advancing, as usual, with the vanguard of his 25th Panzer Regiment on his division's left flank, he had outstripped the truck-borne infantry of his 6th and 7th Motorized Infantry Regts. and the flanking units of 5th Panzer Division and the motorized SS-Totenkopf-Division. On 21 May, with his infantry and artillery vulnerably exposed, a combined attack from the north-west by the British 50th Infantry Division, 1st Tank Brigade (4th and 7th RTR), and French 3^e Division *Légère Mécanique* with some 140 tanks fell upon his division.

The only thing that stood between Rommel and disaster were the batteries of 88mm and 105mm guns which had quite fortuitously been positioned in just the right place. As the artillery engaged the Matildas and French tanks swarming out on to the plain at Beaurains, Rommel swiftly turned his tank regiment through 180° to go to the gunners' rescue — and ran straight into an anti-tank screen which knocked out 30 of his tanks. Although his report claimed most credit for defeating the Allied armour for the 7th, it was in fact the timely arrival of 5th Panzer which saved the day.

On 26 May Rommel was awarded the Knight's Cross. From Arras on there was no stopping the Panzers, and Rommel raced on to the coast. He captured the bulk of the British 51st Highland Division at St. Valéry-en-Caux on 12 June; and pressed on to Cherbourg, which fell on the 18th, four days before France surrendered. In its six-

Peter Dennis's reconstructions show (top) Montgomery as GOC 3rd Division in France, 1939-40. The figure is based on a photograph taken during a visit to his 7th Guards Brigade in November 1939. He wears the Service Dress cap, with the red staff band and embroidered gold-on-black general officers' badge. He claimed to have been the first senior officer to habitually wear the 1937 'Battledress, Serge'; note ankle tabs of this first pattern. The blouse bears embroidered rank insignia, on red backing, on the shoulder straps; and on the collar points the scarlet corded bosses which were worn in place of gorget patches at this time. The boss was authorised by an order of 15 May 1940, although the photo of Montgomery clearly shows him wearing it in November 1939. His medal ribbons are those of the DSO; 1914 Star with rosette; 1914-18 War Medal; (second row) 1918 Victory Medal with oakleaf; General Service Medal with oakleaf; King George VI Coronation Medal; and French Croix de Guerre with palm.

(Below) Generalmajor Rommel as GOC 7th Panzer Division, Cherbourg, June 1940. He wears the service dress cap (Schirmmütze) with gold generals' cords and piping; at this date the two insignia were still in white metal. Photographs show that Rommel already liked to wear issue motor-cyclist's goggles on his cap. His service dress tunic (Dienstanzug für Generale) is of high quality; it has the usual deep cuffs, deep blue-green collar, the generals' gold buttons and gold bullion national emblem on the right breast. The generals' scarlet collar patches with gold oakleaf embroidery, and scarlet-based shoulder straps with interlaced gold and silver cord, are the only other insignia. On campaign in 1940 Rommel wore no decorations apart from his Pour le Mérite and, from late May, his Ritterkreuz. Note the colour contrast between the field grey tunic and stone grey breeches, here with generals' scarlet stripes. He wears the officer's field service belt, and a holstered Walther pistol; and carries issue binoculars slung round his neck. The camera is a 35mm Zeiss, a present from Josef Goebbels.

week *Blitzkrieg* the 'Ghost Division' had taken 97,468 prisoners, and captured 458 tanks and 341 artillery pieces. But the price was high: Rommel's losses — 2,594 killed, wounded, captured and missing — were the highest of any suffered by the Panzer divisions. MI

Maj. Gen. B.L. Montgomery,
GOC 3rd Division, France 1939-40



Generalmajor Erwin Rommel,
*Kommandierender General
7. Panzer-Division,
France 1940*

